August 5–8, 2022

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Reimagining Petaluma

Petaluma, CA DAT Report

Disclaimer

The ideas represented in the following report are those of the American Institute of Architects' design assistance team, based on our observations of Petaluma and its existing plans, the insights gleaned from the community's public workshops and conversations, and the ideas shared with us about the area and the aspirations for it in interactions with a range of stakeholders. The process has informed our thoughts and this report represents our best professional recommendations in the public interest. We do not serve a client in this endeavor. The report, and the process that produced it, is a public service to the Petaluma community.

The ideas captured here represent four intensive days of work (August 5-8, 2022) and the information available to us at the time of this writing. We do not expect this report to be followed as verbatim, prescriptive advice. This work represents a beginning – we hope a new beginning – for the area. It should be understood as a developmental tool, and we expect the community will expand on these ideas and amend them as you make it your own. This report serves as an opening mechanism to begin the necessary public work and we expect the ideas to evolve and change as you utilize it and as Petaluma continues to evolve through the public processes to follow.

Contents

Introduction

The Design Assistance Team Program

The DAT program is a public service of the American Institute of Architects (AIA). Through the DAT program, over 1,000 professionals from more than 30 disciplines have provided millions of dollars in professional pro bono services to more than 200 communities across the country, engaging tens of thousands of participants in citizen-driven community development processes. While the normal public decision-making process is conducted within the parameters of representative government, design assistance transcends the political process and expands the public dialogue to include other sectors with the intent of building a platform for cross-sector collaboration, civic leadership, and a new approach to public work. The design assistance process brings together government and civic leaders, the business sector, non-profit leaders, and the general public in an inclusive, 'whole-community dialogue' to build collective action plans for the future. The Design Assistance program operates with four key considerations:

It begins with the idea that every community represents a unique place that is the product of its own history, tradition, and evolution. There are no one-size-fits-all approaches to community development. Therefore, each project is designed as a customized approach to community assistance which incorporates local realities and the unique challenges and assets of each community. Public processes are designed to meld with local practices, experiences and culture while expanding participation to all citizens.

Second, successful community strategies require whole systems analyses and integrated strategies. As a result, each design assistance team includes an interdisciplinary focus, incorporating and examining cross-cutting topics and relationships between issues. In order to accomplish this task, the AIA forms teams that combine a range of disciplines and professions in an integrated design process.

Third, successful communities work together for the common good, moving beyond narrow agendas to serve the whole. Each community is required to have a broad-based local steering committee that is representative and can lead community engagement efforts, ensuring all community members are represented in the process. The goal of the design assistance team program is to provide communities with a framework for collective action. Each project team is constructed with the goal of bringing an objective perspective to the community that transcends the normal politics of community issues.

Finally, community development requires collective public work that empowers citizens to partner. Each design assistance project is a public event, an act of modern democracy. The citizen expert is central to the process. Community-owned processes are designed to incorporate dozens of techniques to engage the public in a multi-faceted format, involve the community across sectors, and provide a platform for meaningful participation that builds a collective action plan. This approach allows the national team to leverage the best existing knowledge base available in formulating its recommendations – citizens. It also provides a platform for relationship building, partnership, and collaboration for implementation. The final action plans reflect citizen voice and include phased recommendations which begin with volunteer-driven, no-cost efforts and scale upward and outward. Citizen groups become empowered through the process and community leadership is broadened beyond government. Its grassroots approach captures the ethos of successful community development.

About The Petaluma Team

The Petaluma Design Assistance Team (see appendix for the full team roster) is an interdisciplinary group of professionals from around the country that were assembled specifically for this project. They were deliberately chosen from outside the state of California. They were not paid for their service to the Petaluma community. They were not engaged in any business development activities. It is also important to note that AIA teams do not serve a client. They were not another consultant team hired by a developer, institution, or government agency. As a group of legitimate outsiders, their efforts are all made in public service to the community and the recommendations offered in this report are done so in the public interest, taking into account the community's values and aspirations, as well as the existing conditions. The team's role in this process included the following key components:

- The review of dozens of existing plans and background documents about the area.
- The observation of conditions in the area in order to gain an understanding of Petaluma's physical framework, the issues facing the community, and its opportunities.
- Conversations with resident experts and stakeholders to benefit from their experience and knowledge about existing conditions, community values, priorities, and aspirations for the future.
- The application of their best professional expertise in the public interest, using information learned through the process and community priorities to develop a set of strategies that respond directly to the needs, values, and desires of the community.

The Petaluma DAT Charge

In late 2019, Petaluma submitted an application to the AIA for a project that would help the community create a vision for achieving a well-designed, equitable, carbon neutral city within the next 25 years, with the intention of integrating the DAT recommendations into the upcoming General Plan update. The original application was accepted by the AIA in 2020, a DAT team leader was duly appointed, and community representatives and AIA staff began discussing next steps for moving forward with the project. In March of 2020, the Covid-19 pandemic halted those plans, ultimately resulting in a two-year pause in the process. In the intervening years, Petaluma continued to make significant progress with regards to its livability and climate goals, including the adoption of the Climate Emergency Framework, which became the guiding document for Petaluma's General Plan and Climate Action Plan. The City also received a Cool City Challenge program grant to help neighborhoods become more planet friendly, disaster resilient, and community rich by engaging 300 Petaluma blocks. Given those and other developments, it was obvious that the focus of the DAT should evolve to better reflect Petaluma's present day needs in 2022 and to complement the continued forward momentum of the preceding two years. Accordingly, the DAT concentrated on creating a plan for achieving a more equitable and resilient Petaluma through improving mobility, increasing connectivity, creating 15-minute neighborhoods, and decarbonizing the community. The following report is offered in the public interest with those goals in mind. We hope that it may serve as a guide to implementation in the coming years.









POSITIVE
OUTCOMES


ZONING


localuma
Community-led Design Workshop


JENNA
Scott


YES!


Reimagining
Mobility

Reimagining Mobility

For the City of Petaluma to achieve its goals related to carbon neutrality, climate resiliency, connectivity, safety, and equity, it must reimagine how residents, visitors, and commuters move around and through the community. Prioritizing space (e.g., the number of travel lanes and the number of parking spaces) and time (e.g., at signalized intersections) for motor vehicles and single-occupant vehicle (SOV) trips runs counter to Petaluma's community goals and City Council priorities. To reduce vehicles miles traveled (VMT) and its negative impacts, Petaluma must:

1. reallocate space, time, and resources to converting SOV trips to walking, bicycling, and transit trips, and
2. reduce the distance travelers must traverse to meet their daily needs.

Preliminary Observations

The Design Assistance Team (DAT) participated in a community tour and conducted a preliminary review of local, transportation-related documents including the following:

- City Council Goals and Priorities, FY 2021-2023
- Capital Improvements Program
- City Streets Standards
- 2008 Bicycle and Pedestrian Plan
- 2022 Active Transportation Plan maps
- 2021 General Plan: Existing Conditions Report – Transportation
- 2022 Local Road Safety Plan

The DAT observed the following:

- Each of City Council's goals address transportation in some way. City Council recognizes the need to prioritize safe and connected streets and trails for walking, bicycling, and transit. Furthermore, City Council recommends adopting a VMT policy consistent with Petaluma's goal to be carbon neutral by 2030.
- The Public Works & Utilities Department has found recent success in piloting and experimenting with new street design solutions, such as the parking-protected bike lanes on Rainier Avenue and the mini traffic circle at Bassett Street and Upham Street.
- While many of Petaluma's neighborhoods feel safe and comfortable internally for walking and bicycling, several barriers inhibit inter-neighborhood and cross-town travel. These barriers include the 101, McDowell Boulevard, the SMART rail, the Petaluma River, and Petaluma's high-speed and high-volume roadways.
- Washington Street serves many different purposes including: connecting west Petaluma to the 101 to east Petaluma; providing access to key destinations such as downtown, the Fairgrounds, the SMART station, and commercial areas; and serving as a gateway for the community. However, its roadway width, high traffic volumes, high traffic speeds, and lack of high-comfort and connected sidewalks and bikeways makes the roadway a barrier to active transportation.

Community Input

Attendees at the community workshop on August 5, 2022, specified several challenges, assets, and opportunities for improving transportation in Petaluma.

Existing Challenges

- Narrow sidewalks
- Fragmented bikeway network
- Unreliable transit service
- Limited cross-town connectivity
- Motorists speeding through neighborhoods

Existing Assets

- Walkable downtown
- Some walkable and tree-shaded neighborhoods
- Parks and paved trails

Opportunities for Action

- Discourage driving and encourage walking, bicycling, and transit.
- Widen sidewalks, fill sidewalk gaps, and make crossings safer.
- Expand the bikeway network.
- Provide shared micromobility options, e.g. e-bikes and scooters.
- Increase secure bike parking.
- Provide fare-free transit.
- Reduce commuting distance and commuting by car.
- Reduce motor vehicle volumes and speeds.

Recommended Actions

Based on preliminary observations and what community members highlighted as challenges and opportunities for transportation and mobility, the DAT makes the following recommendations, categorized into three big ideas:

1. Remove Barriers

2. Create Connections

3. Expand the Framework

Remove Barriers

Roadways and intersections with high traffic volumes and speeds, railways, the Petaluma River, and gaps in the active transportation network are significant barriers for walking and bicycling. Removing or mitigating these barriers is essential for making Petaluma safe and comfortable for people on foot or wheels.

Fix Washington Street

Washington Street is one of Petaluma's lifelines: it facilitates cross-town trips; provides a direct connection to downtown, the Fairgrounds, and key commercial destinations; and it interfaces with the 101. However, it acts as a barrier to multimodal travel because of its number of travel lanes, motor vehicle speeds, and lack of safe and comfortable crossings. Previous and ongoing planning efforts have identified Washington Street as a high-crash and high-injury corridor, especially for people walking and bicycling. The City and its partners must fix Washington Street to meet its goals related to climate resiliency, carbon neutrality, vehicle miles traveled, connectivity, and safety.

Implementation

Washington Street can be transformed physically and operationally to be safe and comfortable for people walking and people bicycling who are traveling along or across the street. A reimagination of Washington Street could include continuous and high-quality sidewalks and bikeways; street trees, landscaping, and green infrastructure; slower motorist speeds resulting from fewer and narrower travel lanes, traffic signal coordination, and traffic calming features; high-comfort crossings and intersections that prioritize time and space for walking and bicycling; bus stops that provide

shade, seating, shelter, and serenity; and wayfinding that improves the legibility of the transportation system.

Critical Next Step

Conduct a corridor study that emphasizes safety, environmental sustainability, and placemaking over motor vehicle throughput.

Address the road, rail, and river

In addition to Washington Street, several other physical barriers currently prevent safe and comfortable travel for people walking and people bicycling, including: the City's high-speed roads (e.g., McDowell Boulevard, Ely Street, Lakeville Highway), the SMART rail, and the Petaluma River.

Some existing at-grade crossings between Petaluma's paved trails and high-speed roads require trail users to take indirect, uncomfortable, and time-consuming routes to continue on their way.

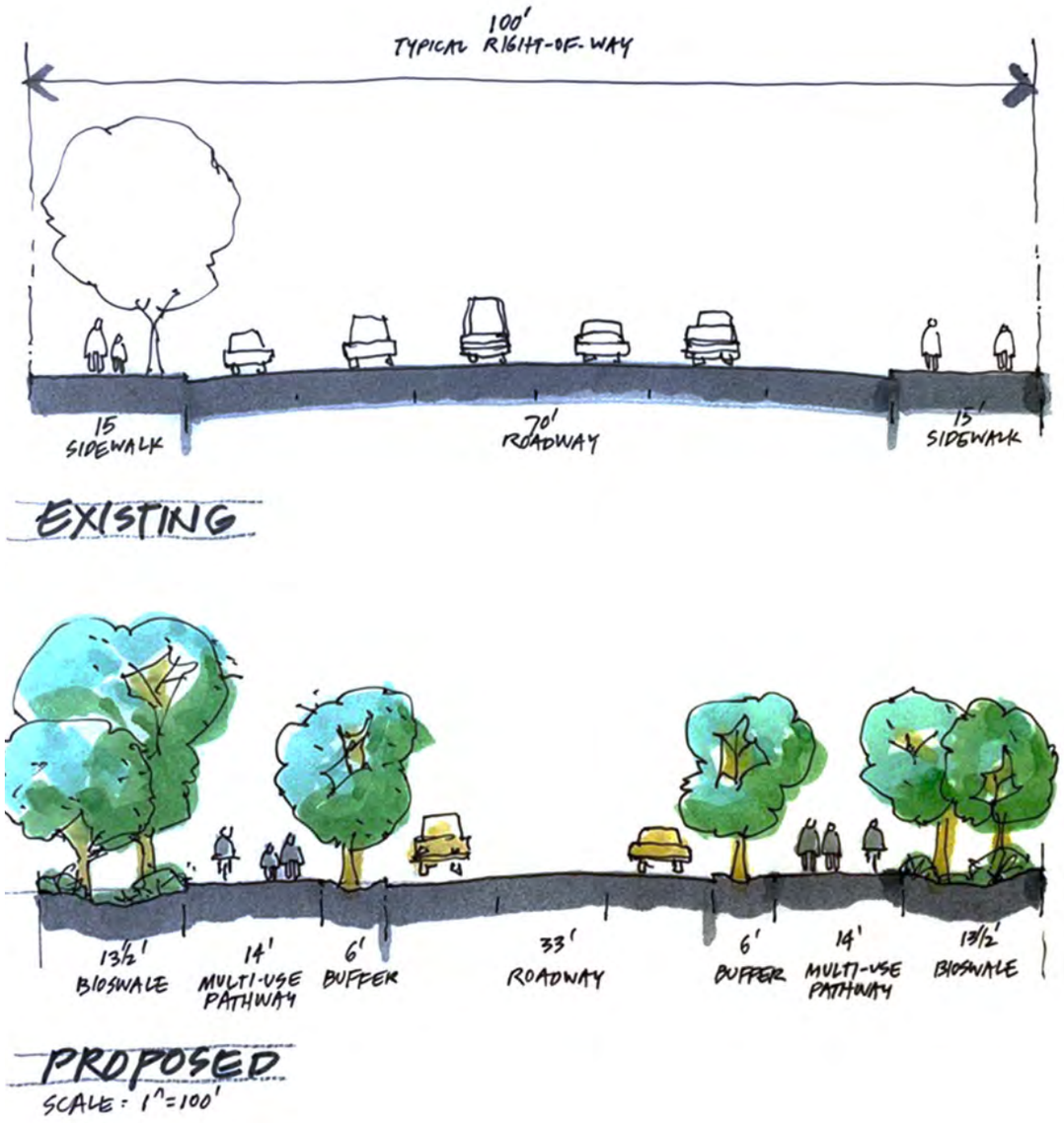
While Petaluma has successfully installed crosswalk markings, signs, and rectangular rapid flashing beacons (RRFBs) at mid-block locations and intersections, activated RRFBs do not legally require motorists to stop or yield. They can also result in multiple-threat scenarios on multi-lane roadways where stopped motorists may obscure the view of approaching motorists, increasing the likelihood that motorists will strike crossing pedestrians.

Implementation

To mitigate and remove these barriers, the City should improve existing at-grade crossings for roadways, invest in grade-separated crossings between trails and roadways, and construct new grade-separated crossings for the SMART rail, Petaluma River, and roadways where high-comfort crossings can't be constructed at grade.

The City can update their street design and construction standards to include standard details for intersections and crossings that prioritize space, geometry, and operations for people walking and people bicycling.

Conceptual rendering of an improved Washington Street, featuring a tree-lined, bike-and-pedestrian friendly narrowed roadway.



Narrow existing roadways to reduce them as barriers to active transportation.

Proposed cross-town connectors, such as the ones to extend Rainier Avenue and Caufield Lane, must prioritize walking and bicycling to prevent them from becoming future barriers to active transportation.

Crossings for paved trails (e.g., the Lynch Creek Trail) should prioritize safety and convenience for pedestrians and bicyclists traveling along the trail. At-grade crossings with high-volume, high-speed roadways deter trail usage.

Critical Next Step

Study and prioritize at-grade crossings for upgrades or grade separation.

Make sidewalks and curb ramps accessible

The Americans with Disabilities Act requires that all public facilities comply with the United States Access Board's Accessibility Guidelines. The Accessibility Guidelines include guidance for curb ramps, sidewalks, paved trails, crossings, intersections, and bus stops.

Many of Petaluma's sidewalks, curb ramps, and bus stops require upgrades to be accessible to people with disabilities while also benefiting other travelers such as children on bicycles and people with strollers. While the City owns sidewalks in the public right-of-way, Petaluman property owners currently bear the responsibility to repair and maintain them. This arrangement often results in broken and uneven sidewalks that property owners—especially low-income homeowners—are unable to pay to repair.

Furthermore, the City's annual resurfacing program currently only addresses the pavement between the curbs and doesn't include constructing new curb ramps or reconstructing non-ADA-compliant curb ramps.

Implementation

The City of Petaluma should identify and prioritize sidewalks and curb ramps that require repair or reconstruction to comply with the Accessibility Guidelines, beyond the ongoing curb ramp reconstruction project in downtown Petaluma. Historic disinvestment or lack of investment should influence the prioritization process to advance the City's social equity goals. The City should then assume responsibility for these repairs, since sidewalks are public infrastructure and the expectation that homeowners would pay for repairs disproportionately impacts low-income people.

The City can more efficiently install ADA-compliant curb ramps by including them in their regular street resurfacing program. This would streamline local efforts to improve crossings by consolidating the installation of signs, pavement markings, and curb ramps.

Critical Next Step

Prioritize sidewalks, curb ramps, and bus stops outside of downtown for repair and upgrades.

Upgrade intersections and crossings

Crossing design and traffic signal operations greatly affect the pedestrian experience, since the threat of being struck by motorists is a major source of discomfort and can be a deterrent for walking trips. Driveways, intersections, and traffic signals should clearly communicate right of way, minimize through and turning motorist speeds, and reduce conflict points.

Implementation

To upgrade infrastructure and signal operations at intersections and crossings, the City should integrate pedestrian recall (always) and Leading Pedestrian Intervals (where high pedestrian volumes are expected or desired). The City should also use the Federal Highway Administration's (FHWA) Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations to determine the best crossing treatments based on roadway characteristics

Critical Next Step

Study and prioritize crossings and signalized intersections for pedestrian upgrades.

Create Connections

Connectivity and reliability are paramount for making walking, bicycling, and transit trips more attractive than SOV trips. Active transportation and transit should be safe, easy, convenient, comfortable, and direct.

Reallocate space (road diet)

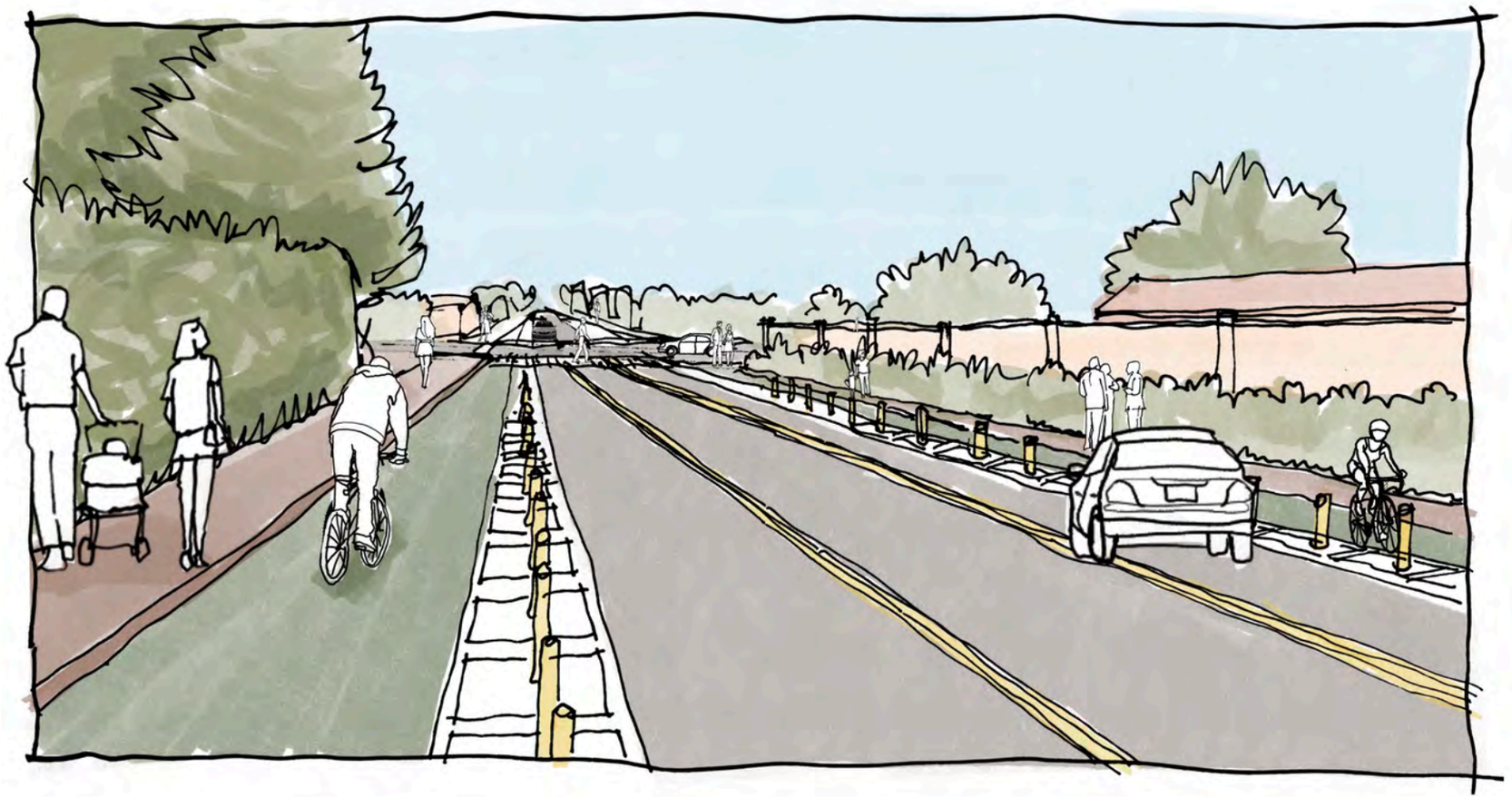
To meet its goals, the City must expand its bikeway network and enhance its Petaluma Transit system operations. However, implementation via roadway widening is often cost prohibitive and may not support the City's VMT reduction goals. In advance of full roadway reconstruction, the reallocation of existing roadway space through restriping and pilot installation of low-cost materials can be an effective method to installing bike lanes, bus lanes, and queue jump lanes. Known as "road diets," roadway reconfiguration can include travel lane removal, parking lane removal, and lane narrowing to maintain existing curb-to-curb width or existing right-of-way. A typical road diet converts a road with four travel lanes to a street with two travel lanes, a center turn lane, and bike lanes. Local examples include Petaluma Boulevard South and Rainier Avenue.

Implementation

The City of Petaluma must reimagine how it allocates space on its arterials. The City should identify candidates for road diets, which are generally characterized by some combination of the following: three or more travel lanes, travel lanes that are 12 feet wide or wider, underutilized parking lanes, or average daily traffic volumes under 15,000 vehicles per day. The City can then develop short-term concepts that can be implemented through simple resurfacing and long-term concepts that necessitate full reconstruction. The elements included in the concepts should tie directly to City goals and may include bus lanes, bike lanes, and crossing treatments in the short term and street trees, green infrastructure, shared-use paths in the long term.

Critical Next Step

Identify and study streets that may be near-term or long-term candidates for space reallocation.



Reallocate space to prioritize the movement of people rather than the movement of cars.

Build out paved trail network

Because of their limited points of conflicts with motorists, their shade, and their relative quiet, Petaluma's paved trails typically see users that might not otherwise travel by foot or bike on the city's streets. However, the existing paved trail system is disconnected and includes uncomfortable and inconvenient at-grade crossings with high-volume, high-speed streets.

Implementation

Following the creation and adoption of the Petaluma Active Transportation Plan (ATP) in 2023, the City should develop a paved trails plan, advance its implementation, and upgrade crossings with roadways. The ATP should prioritize connections to trails and include recommendations for on-street sidepaths that embody the same feeling of safety and comfort as paved trails.

Critical Next Step

Develop a paved trails plan.

Identify pedestrian focus areas

Schools, bus stops, and SMART rail stations present transportation challenges that are unique to students and transit users in their vicinity. Street and intersection design should address these challenges head-on by leveraging a consistent set of design strategies. The identification and delineation of pedestrian focus areas can help the City prioritize transportation investments and further encourage transportation by walking, bicycling, and transit.

Implementation

The City should identify pedestrian focus areas and associated context-sensitive design solutions. This effort could integrate with and enhance the City's existing Safe Routes to School efforts. For example, the City should be more aggressive with traffic calming and traffic control around schools to more effectively protect schoolchildren, who are some of our most vulnerable travelers. Around transit stations and stops, the City should install more trees and shade structures, secure bicycle parking, and wayfinding.

Critical Next Step

Determine criteria for defining pedestrian focus areas.

Improve transit reliability and frequency

Only 3 percent of Petaluman commuters use transit to get to work. Three quarters of Petaluma Transit riders earn less than $35,000 annually, and over half of Petaluma Transit riders are Hispanic.

Petaluma's low-income and Hispanic populations are underrepresented in City leadership and in community engagement. Their underrepresentation may be due in part to fear of deportation, mistrust in the government, and lack of means (time, transportation, information, childcare, etc.), along with the need for more proactive and inclusive outreach efforts from City staff and their partners.

Implementation

In coordination with Sonoma-Marin Area Rail Transit, Sonoma County Transit, and Golden Gate Transit, the City of Petaluma and Petaluma Transit should prioritize increasing the reliability and frequency of their services. In addition to extolling the values of racial and socioeconomic equity in transportation, better transit service would further encourage all residents and visitors to use transit rather than drive.

For transit improvement projects (and all transportation initiatives), the City should invest time and resources into more proactively engaging with and involving Hispanic people and low-income residents, workers, and visitors.

Critical Next Step

Develop a local short-range transit plan.

Expand the Framework

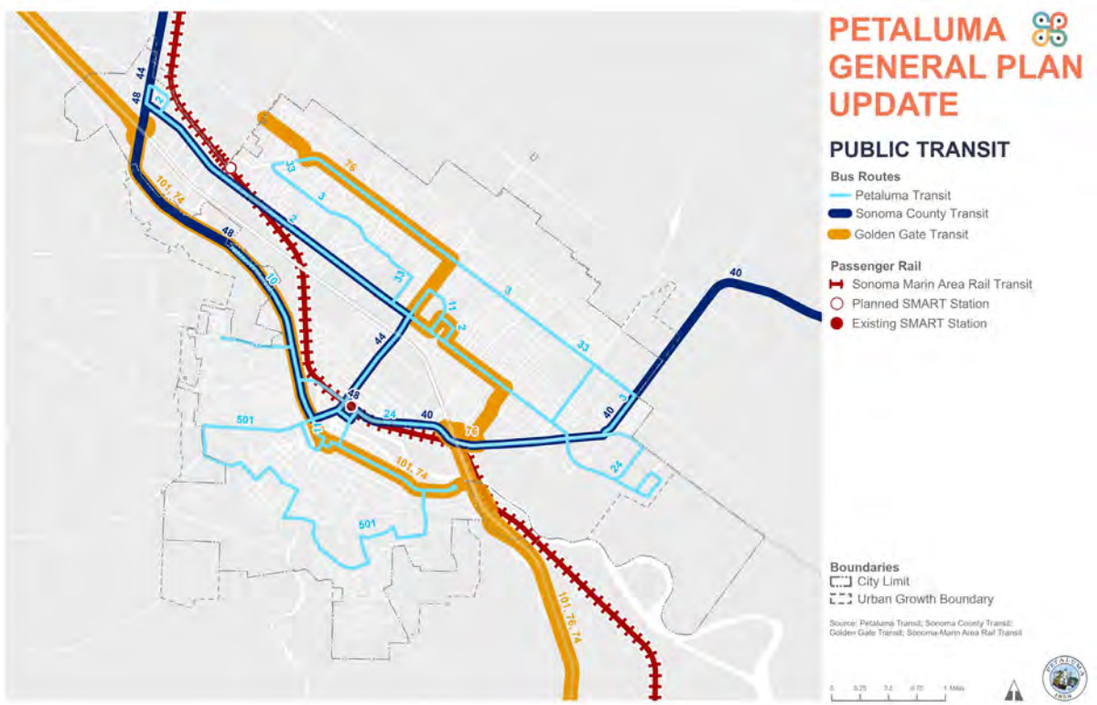
Local policies, programs, and protocols dictate how transportation projects are planned, designed, operated, and maintained. Petaluma can optimize mobility outcomes by expanding its internal processes.

Update street design standards

The latest version of Petaluma's design and construction standards do not reflect essential elements of Complete Streets, and its standard street configuration templates were last updated in 1996. Best practices for street design in the United States have evolved in profound ways since then, especially in the arenas of prioritizing safety for active transportation and incorporating landscaping and green infrastructure.

Implementation

The City should review, revise, and add to their street construction standards to align with the City's goals for reducing vehicle miles traveled, improving safety, and providing connectivity for people walking and people bicycling. Preliminary recommendations for the street configuration templates include lowering design speeds, defaulting to 10' or 11' widths for travel lanes, and requiring sidewalks on both sides for all streets.



Improvements to the reliability and frequency of transit services would have positive impacts on underrepresented populations and reduce the number of cars on the road.

The City can also take advantage of the ongoing Petaluma Active Transportation Plan to develop guidelines for selecting bikeways and crossing treatments. For example, the City may choose to require certain bikeway types by street type to provide safe and comfortable conditions for new and less confident bicyclists. This could include Class I bikeways (shared-use paths) and Class IV bikeways (protected bike lanes) on arterial roads, Class IV bikeways and Class II bikeways (standard or buffered bike lanes) on collector streets, and Class II bikeways and Class III bikeways (bicycle routes and bike boulevards) on local streets. In the meantime, the City should use available national resources such as FHWA's Bikeway Selection Guide and FHWA's Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations.

Critical Next Step

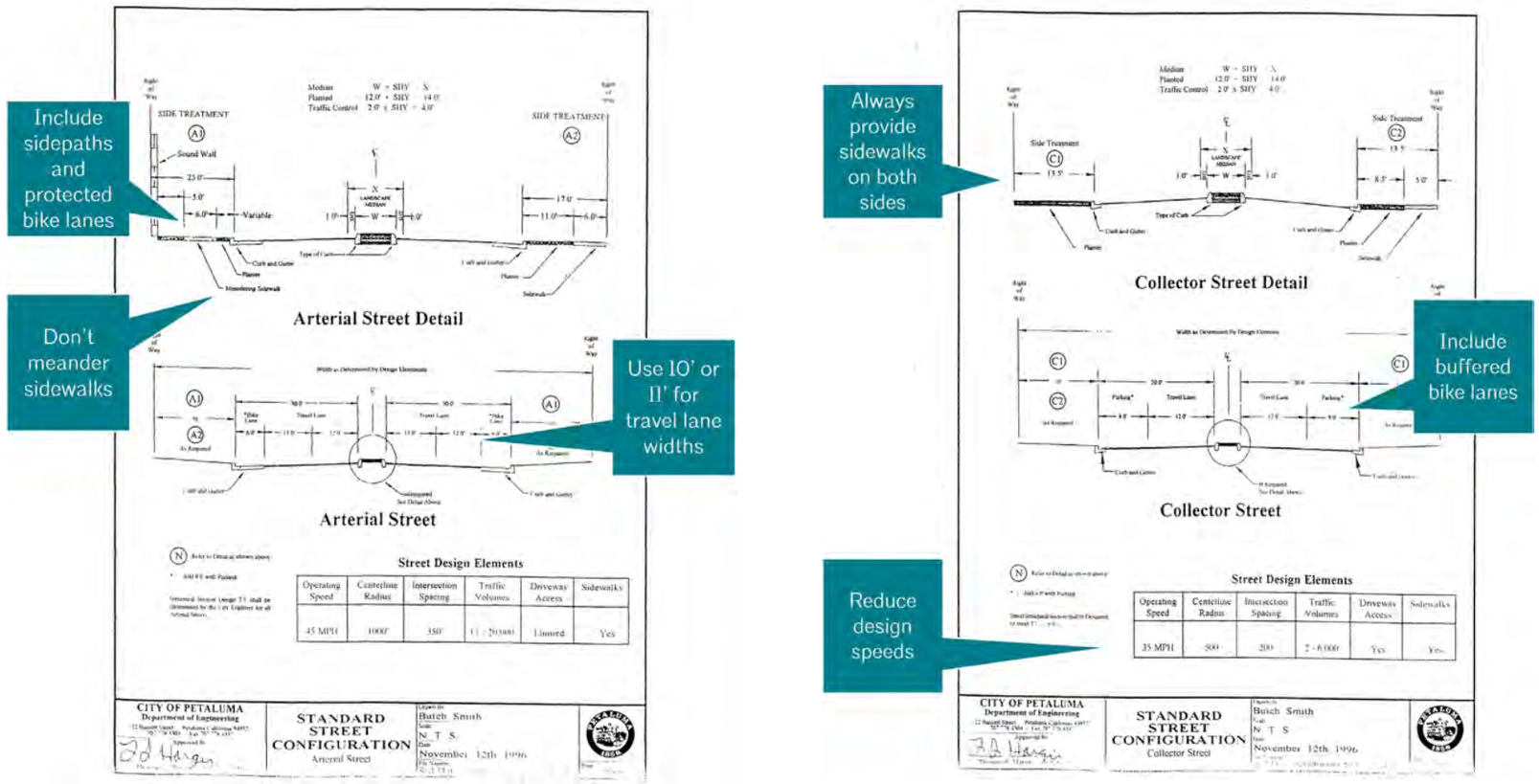
Review and update street design and construction standards.

Create a neighborhood traffic calming program

Residents generally expect their residential streets to have low volumes of motor vehicle traffic and low motor vehicle speeds. During the early stages of the COVID-19 pandemic when the need for additional outdoor space was at a premium, Petaluma—like many other cities—implemented "Slow Streets." These included temporary barriers to reduce and slow motor vehicle traffic, creating a more inviting space for people walking and people bicycling. Even after the removal, the need for a formal neighborhood traffic calming program remains.

Implementation

Building on the momentum of the recent installation of a mini traffic circle at Bassett Street and Upham Street, the City should create a program to manage, study, and respond to requests for traffic calming treatments in Petaluma's neighborhoods. The program would also serve as a tool for the City to pilot design solutions and implement bike boulevards, such as the one planned for



The current street design standards should be updated to reflect current best practices.

5th Street. In addition to more traditional traffic calming treatments such as curb extensions and speed humps, the City should explore or continue to explore mini traffic circles, raised crosswalks, chicanes, and one-lane pinch points.

Critical Next Step

Study the feasibility of creating a neighborhood traffic calming program.

Create a downtown parking program

Motorists can currently park in one of the 660 on-street spaces or 980 off-street spaces in downtown Petaluma without paying a fee. Table 11.1 in Chapter 11 of the City's Zoning Code presents required parking minimums by use, including the following for a single-household building: 1 covered space and 2 additional covered or uncovered spaces. Free and abundant parking contributes to the attractiveness and convenience of travelers using single-occupant vehicle trips rather than walking, bicycling, or using transit.

Implementation

To reduce vehicle miles traveled and its associated negative impacts, the City must consider creating a downtown parking program that charges fees based on parking location. For example: to prevent motorists

circling to find on-street parking, off-street parking should have lower fees than on-street parking. The program should address the growing need and demand for electric vehicle charging. The program could also include residential parking permits to discourage motorists from parking in residential areas to avoid paying parking fees within the paid parking zone. The program should also include considerations for curbside space being used for outdoor seating and dining, bicycle parking, and public art. Finally, the City should reimagine its parking and loading requirements to be maximums rather than minimums.

Critical Next Step

Conduct a citywide parking study.

Update Safe Routes to School program

The Petaluma School District does not provide bus service for students, and it consists of magnet schools that don't restrict attendance by home location. Trips to school might require cross-town or longer-distance travel, and Petaluma's walking and bicycling network isn't fully built out. This results in most students being driven to school, some students using Petaluma Transit's bus services, and a small number walking or bicycling to school.

Implementation

A more comprehensive Safe Routes to School program would prioritize sidewalks, bike lanes, trails, crossings, and intersections that more adequately provide safe and comfortable walking and bicycling conditions for students, especially elementary school students. The City should update its existing Safe Routes to School program to offer incentives, provide information and resources, and monitor progress.

Critical Next Step

Update the existing Safe Routes to School program.

Explore micromobility

Approximately 19,000 Petaluman residents commute out of Petaluma to work, and approximately 22,000 employees commute into Petaluma for work. To get to work, only 2 percent of Petalumans walk, less than 1 percent bike, and 3 percent use transit. Simply put, most Petalumans drive to work (and other purposes) because it's currently the most attractive and convenient option.

Micromobility (electric bikes, electric scooters, and other small, low-speed vehicles) can make transit more attractive by providing an option for transit users to get to and from transit stations and stops, also known as first- and last-mile connectivity. The Downtown Petaluma SMART station and Petaluma Transit Mall on Copeland Street are approximately a half mile away from the core of downtown Petaluma.

Implementation

To further encourage commuters to walk, bike, use transit, or leverage some combination to get to work, the Metropolitan Transportation Commission awarded a $826,000 Capital Bike Share grant to Marin and Sonoma Counties to implement a 300 e-bike system that serves SMART stations between Santa Rose and Larkspur.

The City of Petaluma can further augment the SMART bike share system by creating a local program to pilot micromobility vehicles that are available for rental through mobile apps. To test its effectiveness, the City could explore defining an operation zone that connects the Petaluma Downtown SMART Station to downtown Petaluma via Washington Street and D Street.

Critical Next Step

Establish a micromobility pilot program.


Creating
Connectivity

Creating Connectivity

Historic landscape

At one point in time, Tidal wetlands covered over 16,000 acres along the lower Petaluma River. These wetlands were composed of a range of estuarine habitat types. The river entered the estuary near present day Payran Street and ran for 17-miles to its mouth at San Pablo Bay. Influenced by tidal flux and freshwater input, the wetlands formed a dynamic landscape that supported a wide variety of plants and animals. Bordering the estuary were tidal-terrestrial transition zones, a link between upland and fluvial habitats. Non-tidal wetlands occupied 11,400 acres throughout the watershed, large wetland complexes existed at the Denman Flat area which provided Important habitat to amphibians, migratory waterfowl, and the endangered tricolored blackbird. While flows were minimal in the dry season. The wet season saw several periodically inundated areas along the mainstem of the river and on the alluvial plain to the east.

The City of Petaluma was incorporated in 1868 and rapidly became an important shipping hub. The Petaluma River (formerly the Petaluma Creek) is a tidal slough that has been reshaped and renamed for human uses. As the shipping industry grew, the river channel was modified to become more conducive to navigation. In the 1880's a major effort by the Army Corps was initiated with the purpose of dredging and straightening the river. Railroad lines were also constructed across the watershed in the late 19th century.

This large-scale dredging and construction of numerous cut-offs completely altered the native ecosystem. Since then, tidal wetland types have decreased by 58%. Despite this loss, the Petaluma marsh remains the largest contiguous expanse of historical tidal marsh in San Pablo Bay. Non-tidal wetlands have decreased by 84%, given up for urban development.

In addition to the loss of tidal wetlands, non-tidal wetlands throughout the watershed have also drastically changed. Almost all the wet meadow that existed on the northeastern part of the river has been eliminated. Today most of this area is urban development. As a direct result of this urban development and prior agricultural use the groundwater levels have significantly declined. Current data indicates that the groundwater levels in areas that previously supported non-tidal wetlands are at least 10 feet deep.

It is important to understand the historical environmental context which informs how natural systems existed in a particular place and how their physical characteristics continue to influence ecological patterns and processes in current times. This ecological context helps identify opportunities and constraints posed by the current conditions and any appropriate restoration or management techniques.

Flood Risk

The climate along the Petaluma River watershed is characterized by mild winters and dry summers, resulting in seasonal variations in water flow. During the wet season, flooding is common in the lower areas of the watershed

Areas most at risk from flooding tend to concentrate along the Petaluma River and its tributaries. The northwestern end of the city -Denman Flats- is most at risk from flooding since it falls right in the middle of the FEMA floodplain. This area is predominantly zoned as commercial with some industrial and mobile homes. The southeastern portion of the city is also significantly vulnerable, from here moving further south are complete salt marsh wetlands. In the southeastern portion you have the Petaluma Water Recycling (Treatment) Facility and a large Agricultural/Commercial Development which fall directly within the 100-year floodplain and will require adaptations in the next 50-years.

Despite all the ecological changes and a decrease in the ecosystem functions the watershed once provided, a large amount of undeveloped land within the watershed still exists providing ample opportunities for the restoration of historic wetlands, providing connectivity of wetland habitats. Restoring these tidal, non-tidal and fluvial habitats will provide flood mitigation, groundwater recharge, water filtration and carbon sequestration benefits.

Preliminary Observations

The City of Petaluma has been proactive in preparing plans and establishing urban growth boundaries to manage development, protect valuable natural resources and restore a healthy watershed. Parks and open spaces are an integral part of the community and focus should continue to focus on the restoration of a healthy watershed through the expansion of land for conservation and preservation.

Petaluma River is a tidal slough that has been reshaped to suit human purposes. Recent flooding and siltation have affected the rivers' water carrying capacity, creating serious problems. Increased amounts of impervious areas in buildings and roads accelerate the rate of erosion and sedimentation and contribute to the poor water quality and degradation of natural resources and habitats along the river. Urbanization and its increased expansion play an important role in the health of the watershed.

As part of the investigation process our SDAT team reviewed the following documents and extracted some of the goals enumerated below:

- Petaluma AIA SDAT Application, 2020
- Petaluma General Plan 2025
- Petaluma Climate Emergency Framework
    - Equity – provide equal access to parks and open spaces.
    - Reduce impervious surfaces and develop green street standards, and stormwater management infrastructure to slow, filter, and cleanse stormwater runoff from impervious surfaces (e.g., streets, sidewalks).
    - Expand the urban forest and integrate large, primarily native, trees in neighborhoods to provide shade and improve walkability, air quality, heat attenuation, stormwater capture, and carbon.
    - Restore and enhance the Petaluma River, recreating a healthy and accessible waterway and pedestrian-oriented zone along the banks.
- Petaluma Watershed Enhancement Plan (2015):
    - Maintain navigability of the river
    - Improve flood control
    - Restore, create and protect natural habitats and enhance native vegetation along river corridor
    - Expand public access and awareness of the river
- Petaluma Valley – Historical Hydrology and Ecological Study, 2018

Community Input

Attendees at the community workshop on August 5, 2022, specified several challenges, assets, and opportunities that prompted the team's recommendations around stronger connectivity through green corridors:

Existing Challenges

- Limited ways to cross the freeway and the river
- Pollution of the Petaluma River
- Limited shade when walking in neighborhoods

Existing Assets

- Some walkable and tree-shaded neighborhoods
- Parks and paved trails

Opportunities for Action

- More trees and restoration of wetlands
- Encourage use of the river
- Green belt with walking and cycling paths
- Promoting green zones and public/ open spaces
- Limit asphalt and nonporous surfaces

Recommended Actions

Based on community input, the above established goals, and our professional expertise we developed a series of existing tasks, challenges, and corresponding recommendations to address these measures. Those include:

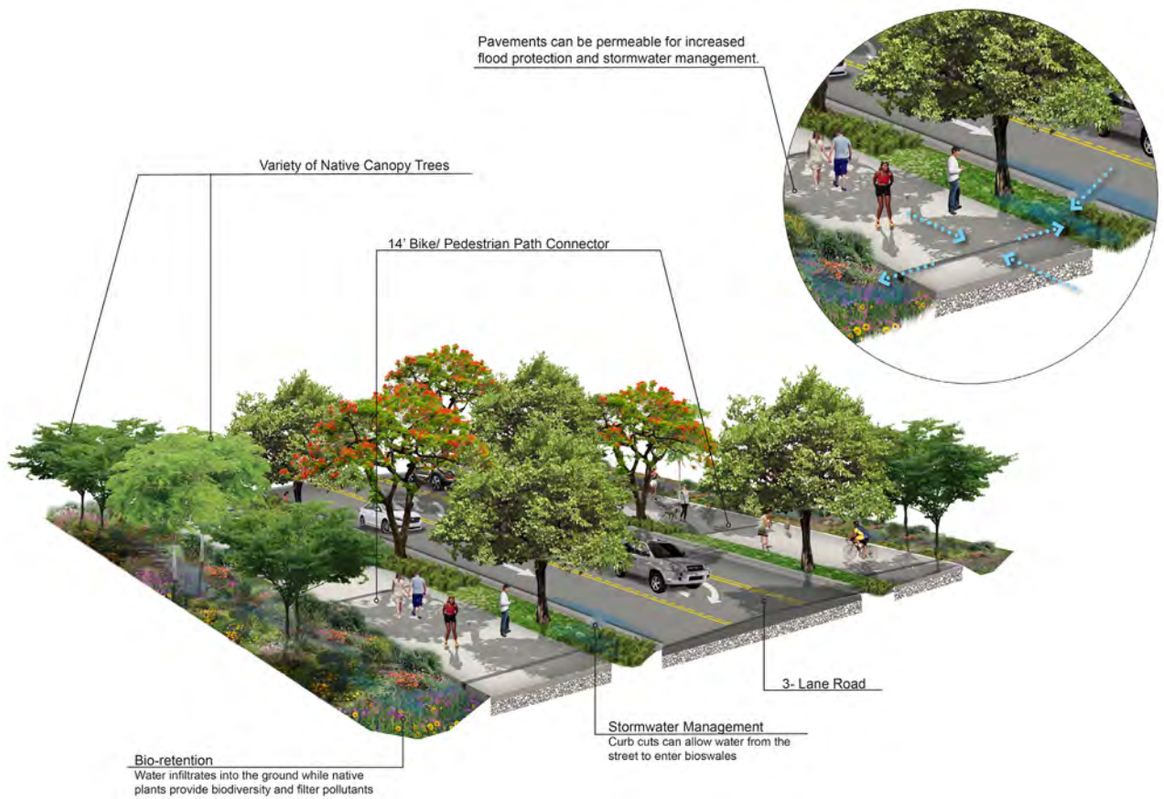
1. Prioritize bike and pedestrian circulation to enable cohesive and diverse mobility options.
2. Provide green infrastructure to manage stormwater, increase capacity for retention, prevent erosion and clean discharge to Petaluma River.
3. Incorporate more nature into the urban environment to facilitate ecosystem restoration, increase biodiversity, improve air quality, add trees to mitigate urban heat island and improve carbon sequestration.
4. Enhance connections to parks and green open spaces.
5. Restore and protect historic marshlands along the Petaluma River to increase water holding capacity and mitigate flooding and sea level rise.

Given Petaluma's residents increased activism and interest we believe the time is right to tackle these goals and transform the City of Petaluma into an example of resilient, sustainable, and equitable living community.

Create a Green Ribbon of Connected Corridors:

Developing a system of interconnected green corridors will provide many benefits for residents and wildlife. Green corridors offer opportunities to relax while enhancing social interaction. Green corridors also provide a major role in a community's well-being by promoting physical activity – increasing levels of walking, biking. Consider reallocating space within the existing automobile centric right of ways, with the purpose of creating a multipurpose pathway for bicycles and pedestrians that is flanked by a shaded canopy of trees and provides green space for the development of bioswales.

Maximize the benefits of the green corridors by connecting green spaces to existing community hubs- transportation or commercial in turn forming a greater green urban framework. Creating a network of green infrastructure that would manage stormwater with natural systems as an alternative to traditional gray drainage pumps and pipes. Green infrastructure includes rain gardens, bioswales, tree pits, natural retention and detention ponds, blue and green roofs, rainwater and stormwater cisterns, and permeable pavement. These natural drainage systems capture, retain, filter, and slow the release of stormwater, using the storage, infiltration, evaporation, and carrying capacity of distributed natural elements rather than buried pipes. In addition, green infrastructure provides attractive landscape amenities, reduces the need for potable water use, lowers the urban heat island effect and stormwater runoff, improves water quality, decreases flooding, sequesters carbon, and recharges needed groundwater reserves. Returning water back to the land naturally rather than sending it down a pipe through a storm sewer is a strategy communities need to adopt. They must work with nature, not against it.



Reallocating space with the existing roadways would allow for the development of multipurpose pathways and bioswales.

This new green ribbon corridor would connect people and green spaces, while collecting, conveying, and cleaning water as it filters through the bioswales prior to discharging into the Petaluma River.

Green corridors allow connections to **people** by:

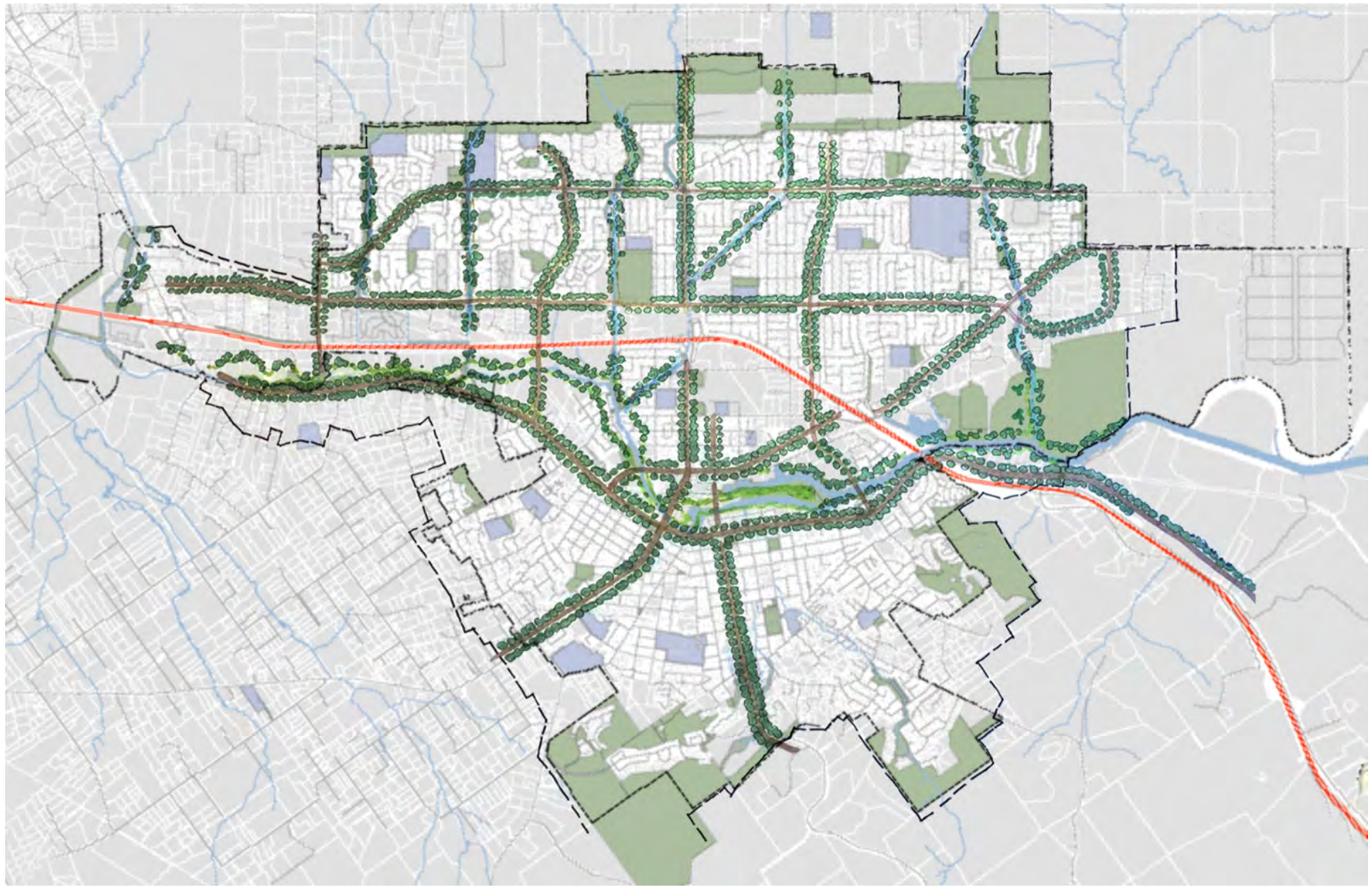
- Reducing private automobile use and providing safe and reliable alternative methods of mobility – walking and biking
- Adding wider pathways
- Shading pathways
- Creating safe crossings
- Providing amenities among pathways

Green corridors allow connections to **community** by:

- Creating spaces for social interaction and economic diversity
- Enhancing connections to the river
- Developing of cultural and recreational opportunities sensitive for environment
- Providing flexible spaces for mixed events – celebrate diversity
- Providing spaces that adapt and respond to changing needs

Green corridors allow connections to **nature** by:

- Decreasing impervious spaces – allowing nature to reestablish itself
- Increasing opportunity to provide diversity of species
- Allowing for natural processes to restore themselves



Transform grey corridors into healthy, walkable, bikeable, resource-rich diverse corridors.

- Managing land to improve carbon sequestration and reduction of transportation related emissions
- Managing land to improve water quality and stormwater management
- Creating a cooler Petaluma through the addition of more trees
- Restoring a sense of belonging and connection w nature

Restore Natural Ecology through the Creation of a Riverfront Park

Restoring the historic tidal marsh expands suitable wetland habitat and creates increased flood protection during the winter and store water during summer droughts. Wetlands are a powerful nature-based solution for climate mitigation, adaptation and biodiversity. They have the capacity to sequester carbon is double that of world forests. This strategy would create a 20-acre park and restore 26 acres of tidal marsh.

The restoration of these lost tidal marshes can provide flood protection due to increased storage for water capacity and groundwater recharge as well as providing added water filtration benefits. Restoring tidal marshes allow the reconnection of tidal conveyance of the Petaluma River.

In addition to the ecological benefits, this newly created riverfront park would provide public access to the water, create more nature-based recreational opportunities, that would allow for public education and awareness of the need to protect nature, provide flexible spaces for community interaction and multicultural recreation. The 20-acre park area could be floodable during storm conditions for added protection to the developed areas of the City.

A Riverfront Park adds 20 acres of park land for the city as well as 26 acres of restored wetlands for flood protection.

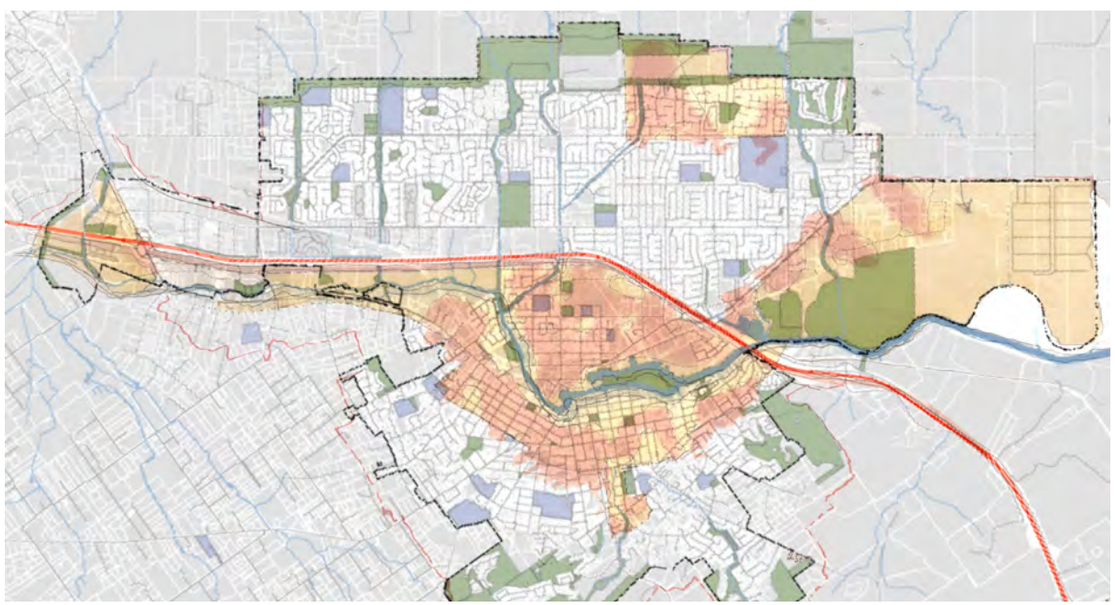
Reduce Heat Using Trees as Infrastructure

Trees within the public right-of-way are considered key components of the infrastructure of many cities. Street trees provide benefits that promote sustainability and help alleviate environmental problems. They provide shade and if properly placed can decrease building energy use. Additionally, trees can help cities control stormwater runoff given their leaves, stems, and roots slow rain from reaching the ground and capture and store rainfall to be released later. Street trees can provide other benefits, such as improved air quality, carbon storage, reduced noise, and aesthetic value. Studies also have shown that the presence of trees can have positive effects on mental health and cognitive function.

Urban areas generally lack suitable places to plant larger trees. Cities in the past have done a poor job in planting and maintaining trees, causing the trees to become hazards for houses, cars and infrastructure. In order to provide healthy trees that can fully provide their span of benefits, trees need the proper soil quality and volume. In urban environments that may mean providing proper infrastructure to support tree growth.

Trees in urban environments need uncompacted, well aerated, and moist soil in order to thrive. These conditions allow tree roots to obtain the essential components they require for healthy growth - nutrients, oxygen, and water. In addition, trees need an adequate volume of root, oxygen-rich soil to thrive and develop the roots to support their structure. Studies show that trees in urban conditions need a minimum of 1,000 cubic feet of soil per tree. Trees can become critical infrastructure, and reduce flooding and pollution given that 1000 cubic feet of good soil can conservatively hold about 200 cubic feet of water. Current technologies such as modular tree cells and structural soils make this volume achievable for urban conditions.

Recently, tree canopy has been recognized as an equity issue. American Forests, a nonprofit conservation



Mapping heat island effect can reveal critical areas for tree planting.

entity released an analysis in 2021, that demonstrated that low-income neighborhoods and communities of color have significantly less tree canopy. Those areas also are more likely to suffer from the urban heat island effect caused by a lack of shade and an abundance of heat-absorbing asphalt. Heat islands can be 10 degrees hotter than surrounding neighborhoods. As climate change continues to exacerbate heat in cities, people are realizing that trees are indeed critical infrastructure. The adjacent Petaluma map illustrates areas where the urban heat island effect is critical. Tree planting should be prioritized in these areas.

Trees are especially unique in that they appreciate in value and capacity to perform, rather than depreciate, over time. The older and bigger a tree gets the better it is able to perform its job.

Adopt Sustainable Strategies for Development

Stewardship of natural resources includes preservation and rehabilitation of ecological processes such as groundwater recharge, pollutant sequestration, pollination services, and nutrient sequestration.

California is already experiencing the effects of climate change, including warming temperatures, rising sea levels, longer fire seasons and shifts in precipitation. Wetlands – coastal, riparian, seasonal, or tidal – all stand to suffer some of the greatest and most immediate and noticeable impacts. The projected changes of greatest concern are sea level rise, salinity shifts, temperature increases, and an increase in the severity of storms

Landscaping to reduce water use can be helpful to greatly decrease the amount of water put on planted areas. Xeriscaping is the process of planting with native drought tolerant species that are adapted to the region's climate, which demand much less water to survive and still preserve a beautiful aesthetic. When watering the lawn or garden short cycles are more water efficient than on long period, this gives plants and the soil enough time to properly absorb water rather than having small standing pools. Another method to reduce water waste in the planted landscape is to create rain gardens to capture runoff and restore soil moisture and groundwater.

Implement waterwise strategies, such as:

- Avoiding any increase in impervious surface cover and contaminated stormwater runoff, helping protect watersheds, recharge groundwater, and mitigate climate change.
- Conducting soil testing to determine soil quality and composition. Lab testing is offered by many university extension offices. When more is known about the soil, then appropriate amendments can be added.
- Ensuring soil is healthy. Healthy soil amended with organic matter such as compost and other nutrients helps plants retain moisture and resist evaporation. Healthy soil also happens to be one of the earth's largest carbon sinks. Once soil is dried out and depleted of nutrients, flood and erosion risks increase and the many benefits of healthy soils are lost.
- Incorporating mulch, which slows down evaporation and protects plant roots from high and low temperatures. Organic mulches absorb moisture and retain it longer than soil that has not been mulched. Place mulch over the soil around plants (leaving some space around the trunk) to reduce evaporation, limit heat stress, and inhibit weed growth. Organic mulches include compost, shredded bark, leaves, and sawdust.
- Reducing compaction without tilling: Aerators can be used to reduce soil compaction without tilling, which causes erosion, evaporation, and greenhouse gas release from soil

- Selecting native and climate-appropriate plants that are adapted to the local environment. Native plants require less water, are more likely to survive drought conditions, and are more pest and disease tolerant than non-native species
- Relying on rainwater to irrigate landscaping. This is the most cost-effective and water-saving option, made possible with the use of native and drought-tolerant plants.

The 15-Minute City

The 15-Minute City

The 15-minute city is a concept that describes a residential community with a decentralized mixed-use development node that provides most of the resident's daily needs within a 15-minute walk from all the residents' homes. The concept – as we know it today – was articulated by Professor Carlos Moreno of Pantheon Sorbonne University in Paris and is loosely based on Jane Jacobs' classic book on urbanism The Death and Life of Great American Cites. The concept has recently been adopted as a planning principal by such influential bodies as the C40 Cities Climate Leadership Group, but the idea of an urban environment being created or substantially altered to better serve the daily needs of residents by purposely de-centralizing commercial functions, employment, and vital human services and thereby reducing automobile use leading to healthier, human-centric, and sustainable cities has many precedents and proponents in the 21st century. It is an idea with a great deal of traction.

One of the primary charges to the AIA DAT team was to apply this principle and describe what becoming a 15-minute city would mean to the City of Petaluma. To do this, we began with mapping exercises.

Note: the maps and drawings present within this section were created during the four-day DAT visit, and are intended to be conceptual and illustrative rather than prescriptive. The intention was not to create detailed schematics, but rather to spark inspiration and a new way of thinking about these areas.

Community Input

Attendees at the community workshop on August 5, 2022, specified several challenges, assets, and opportunities for transforming Petaluma into a 15-minute city.

Existing Challenges

- Poor access to food and other needs in many neighborhoods
- Need more affordable housing options
- Support and services for socioeconomically disadvantaged communities
- Very car-centric, leading to feelings of unsafety for pedestrians and walkers

Existing Assets

- Downtown node is walkable and provides many services and experiences

Opportunities for Action

- Create walkable nodes with food
- Allow more mixed-use neighborhoods that support small businesses
- Rent control
- More equitable spending and development policy between East and West Petaluma

Our Approach

First, given the City's robust mapping database that illustrate social vulnerability and environmental degradation information across the City, we overlayed maps of what we felt were the most relevant data sets to determine where in the City these impacts were compounded. Map 1 ("Base Map") is the base map of Petaluma we used as an underlay.

Map 2 ("Environmental Impacts") overlays heat islands (defined by the US EPA as "urbanized areas that experience higher temperatures than outlying areas") with areas experiencing various pollution impacts such as a relatively higher presence of airborne particulate matter or contaminated soils. As heat islands were present over most parts of Petaluma, the areas where both categories of environmental impact are present have been highlighted in the colored overlay.

Map 3 ("Socioeconomic Disadvantages") combines areas of the City where residents experience higher-than-average housing cost burden, relatively low income, and a cumulative "social vulnerability index" (the potential negative effects on communities caused by any external stresses on human health). These factors are mapped by the solid tones. A fourth factor, poor access to grocery stores (defined as residents who live more than ½ mile from a grocery store), shown by the red outline on Map 3, includes two large pockets of residential lots at the right side of the diagram.

Our next step involved creating a 15-minute walk circle and placing it on the map. The radius of this walk circle represents the distance an average person can walk in 15 minutes, or three-quarters of a mile. The diameter of the circles is twice this distance – one and one-half miles – with a star in the center representing a point within the circle that is not more than 15 minutes from every other point within the circle.

Map 4 shows this walking circle centered on Petaluma's historic downtown representing the facts that the historic downtown is most certainly a vital mixed-use district, but that this downtown is well outside the 15-minute walk distance of most of Petaluma's residents – especially those who live in the City's "east end" on the other side of Highway 101. Our mission, then, was to determine how many of these stars – representing potential mixed-use development "nodes" – would be necessary and feasible to include all the map's yellow zones – the City's residential blocks.

After covering the City with these planning circles so that all residential blocks were included, we needed to shift the nodes as shown in Map 5 according to two important principles adopted uniquely for this exercise. Our proposed locations for development nodes:

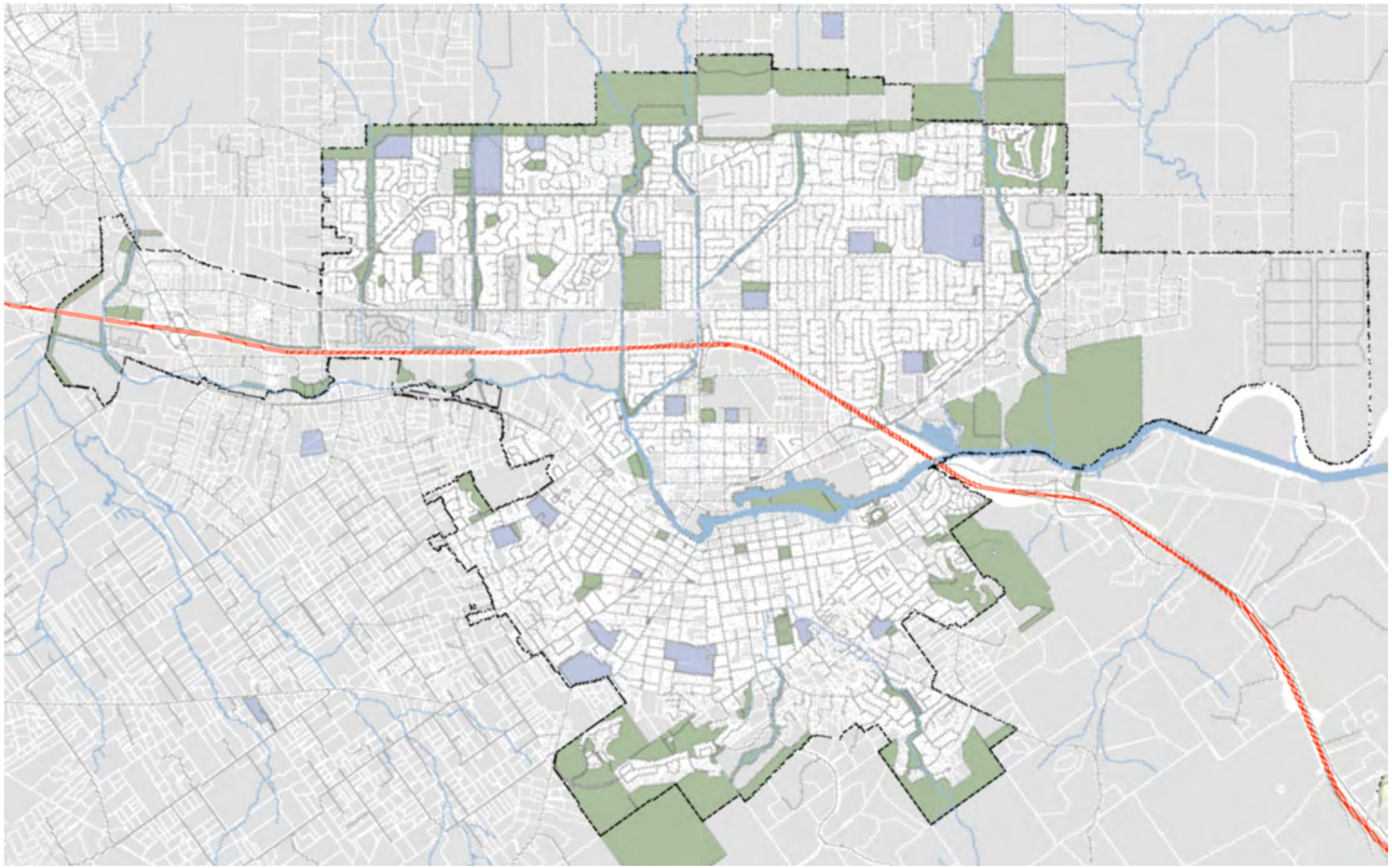
- Do not displace any existing residential units thereby making the locations equitable;
- Are located where existing commercial uses and/or underutilized open space already existed thereby making the locations more feasible.

From this study, we determined that nine of these potential mixed use development nodes would be needed to provide equitable and feasible 15-minute walkable access for perhaps 95 percent of the City's residents. After going back into the City with cameras and maps and finding exact locations for these development nodes, we then assigned them priorities based on the overlayed socioeconomic and environmental impact data of Maps 2 and 3 (see Sketch 1). Map 6 identifies these nodes and prioritizes them.

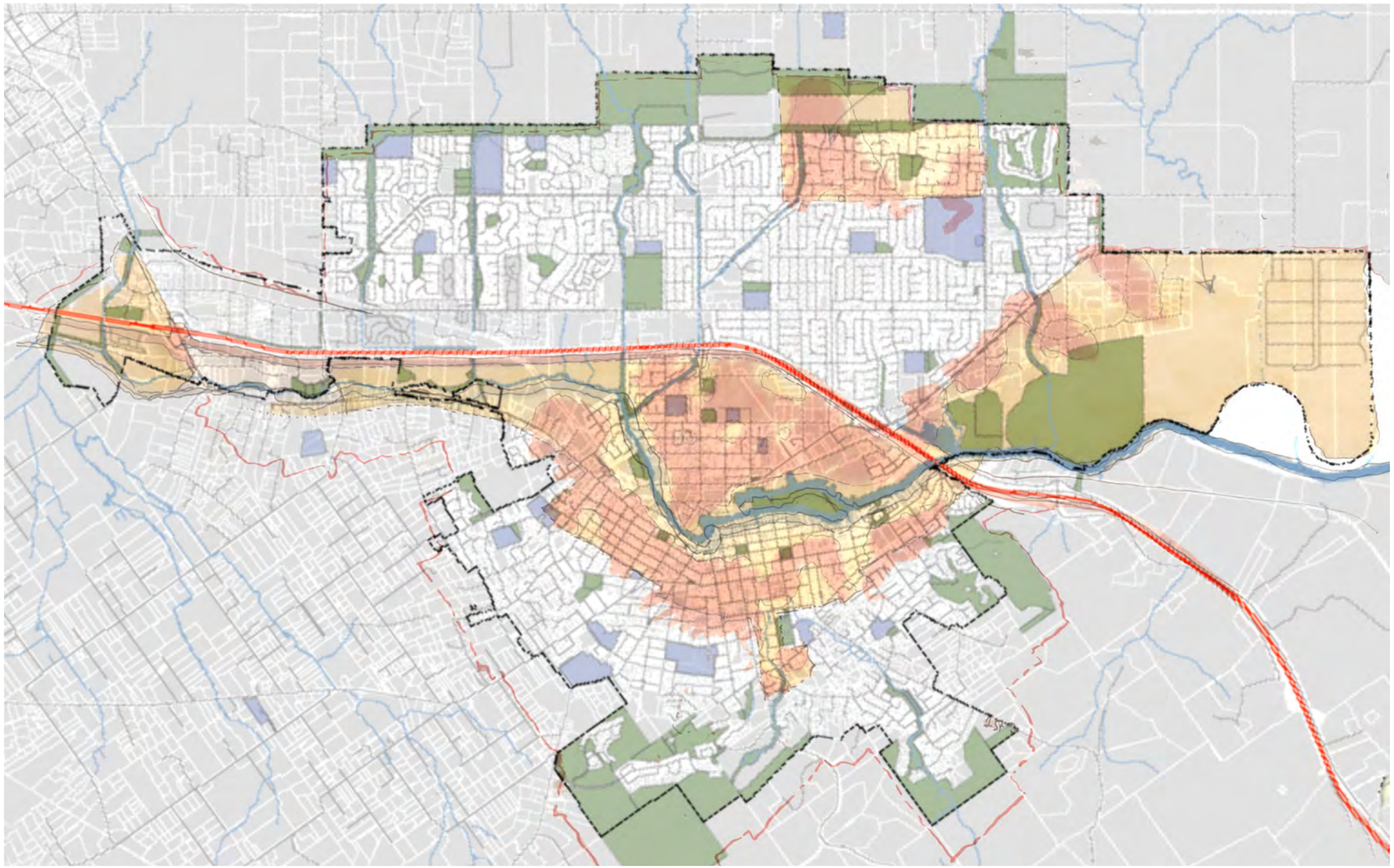
Recommended Nodes

We have classified these nine development nodes in five "tiers". Node 1 is the highest priority development site. Nodes 2A, 2B, and 2C are critically important to achieving Petaluma's goal of becoming a 15-minute city. Nodes 3A, 3B, and 3C present clear opportunities for equitable growth. Development at Node 4 would be advantageous; Node 5 represents a site that needs only minor improvement.

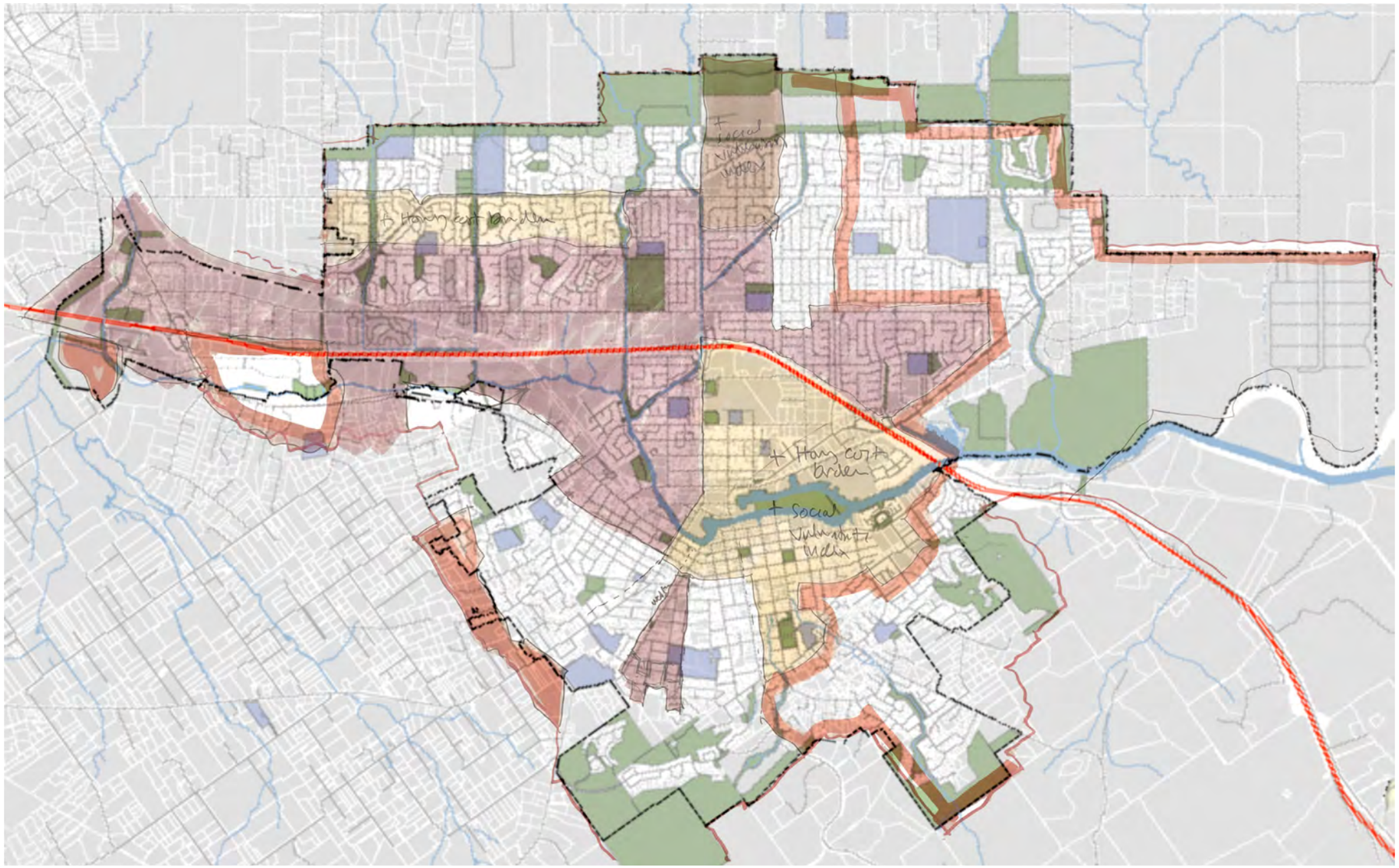
For purposes of this report, we will describe the four nodes in Petaluma's East End first, the three nodes in Petaluma's West End second, and conclude with the two nodes in Petaluma's Midtown.



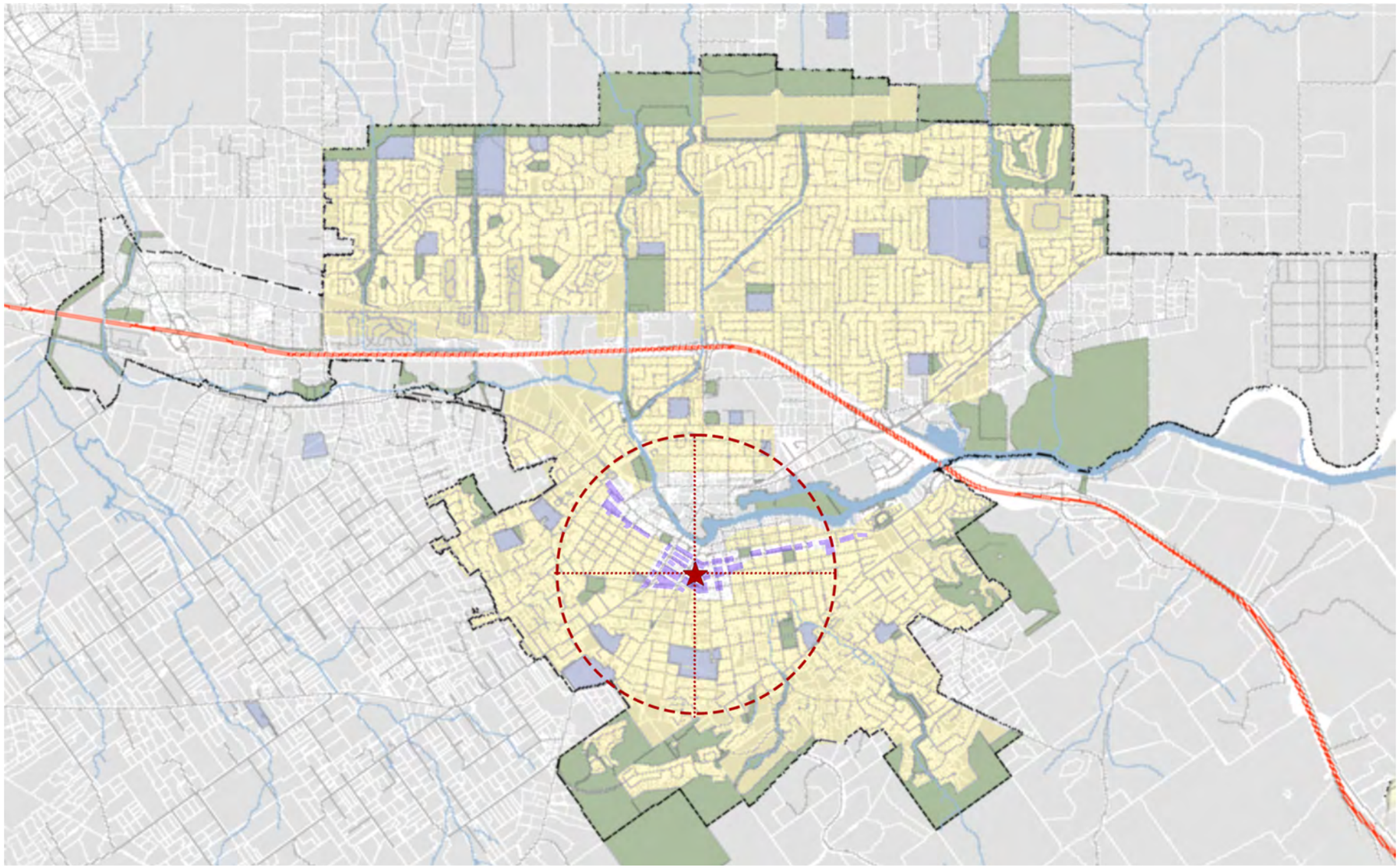
Map 1: Base Map.



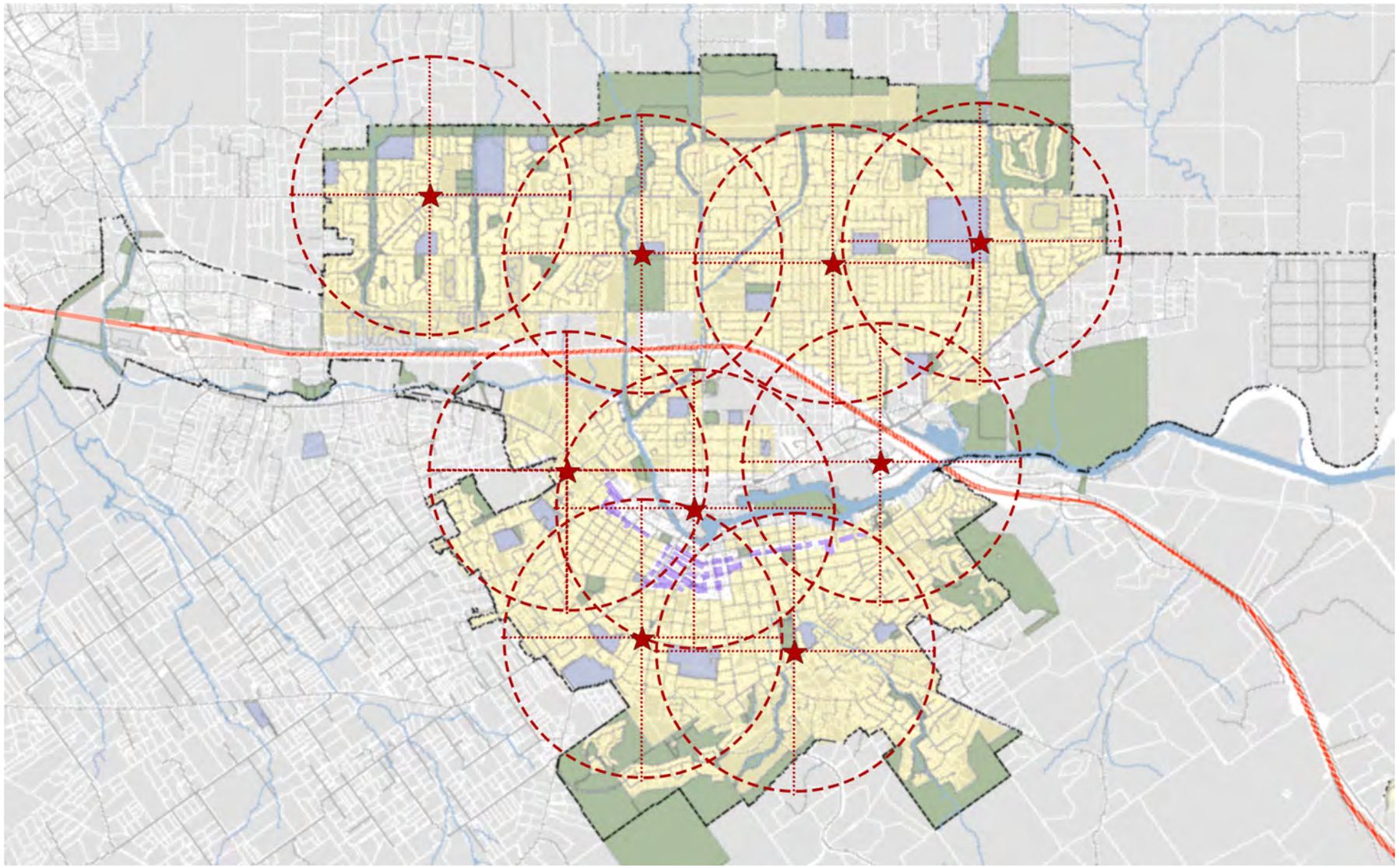
Map 2: Environmental Impacts Overlay.



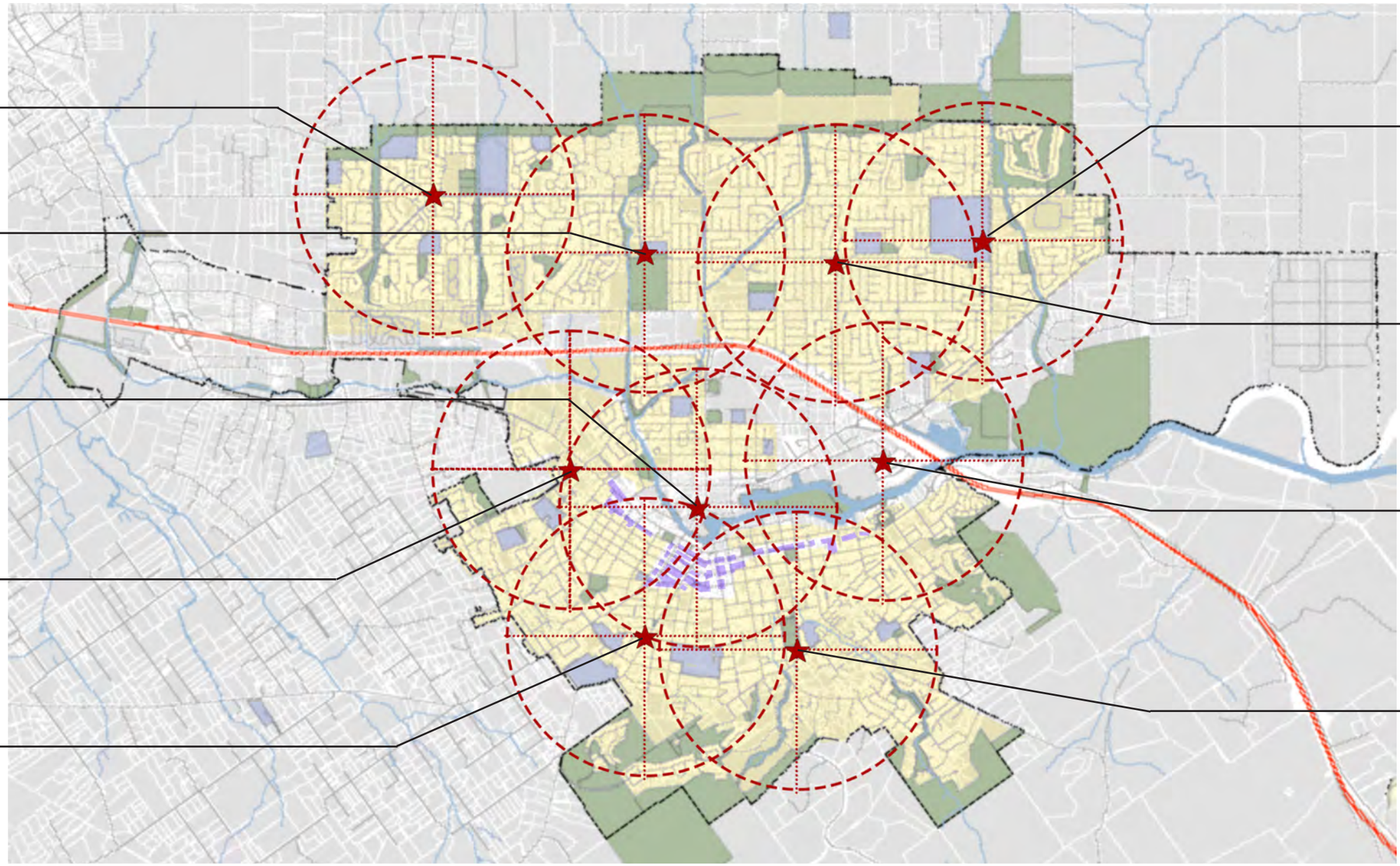
Map 3: Socioeconomic Disadvantages overlay.



Map 4: 15-minute walk circle overlay.



Map 5: 15-minute walk circle nodes



Map 4: 15-minute walk circle nodes identified.

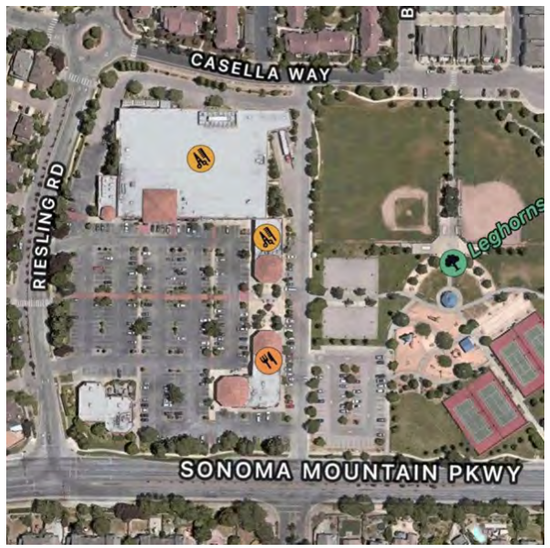
The East End Nodes

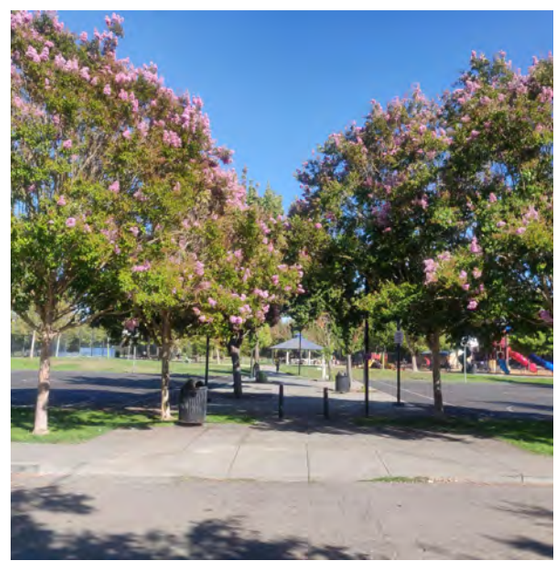
Node 5: Leghorn Marketplace

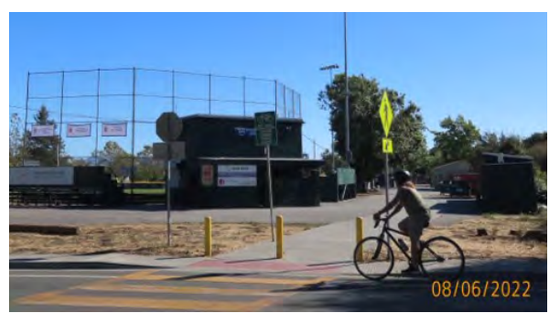
Although many of the residents of the East End's northeastern neighborhoods experience higher than average housing cost burden and other types of social vulnerability, they also already live within a 15-minute walk of an existing mixed-use center called Leghorn Marketplace. As a model for the type of development we would like to see in all the nodes, this center only lacks affordable housing as a program element. It has a grocery store, several restaurants, and is adjacent to a public playground. The dental office being among the currently vacant buildings, a re-leasing strategy should focus on health and human service functions. Pedestrian access to the center is currently challenging; redesigning Sonoma Mountain Parkway as a greenway would certainly improve that.

Node 4: Lucchesi Park

This is one of three nodes where the DAT team had difficulty finding an appropriate development site, but as many of the residents of these East End neighborhoods also experiences higher than average housing cost burden and other types of social vulnerability, we believe some equitable development would have great public benefit here as well. Not wanting to displace housing or schools, we opted in this case to associate a mixed-use node with an existing public park. First, we identified the Boys & Girls Club of Petaluma on Maria Drive a potential non-profit partner. The Boys & Girls Club headquarters building occupies a large site; it could be redeveloped as a multi-story mixed use and affordable housing site with the Boys & Girls Club receiving upgraded facilities and becoming party to the building's ownership. Further development opportunity could include the facilities around the Petaluma American Little League field and a mixed-use development on N. McDowell Boulevard possibly associated with the Petaluma Community Center and East Side Farmers Market.





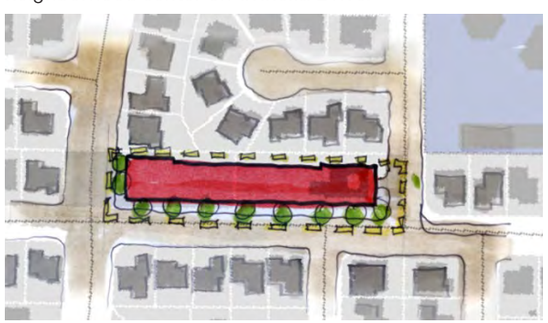


Node 5: Leghorn Marketplace

Node 4: Lucchesi Park

Node 2C: Caulfield & Crinella

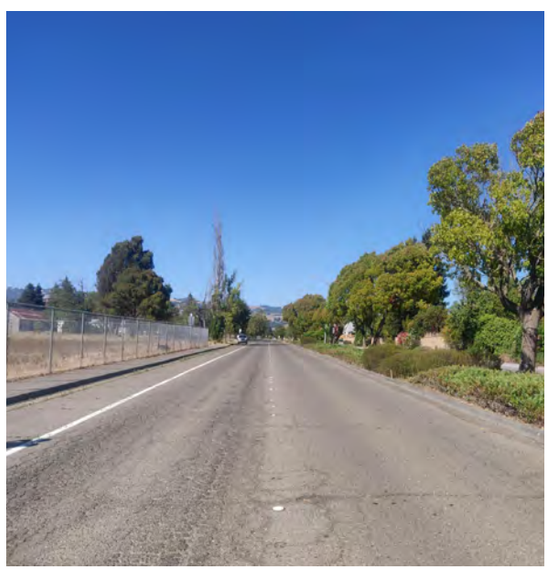
This was the most challenging area of the city in which to locate a mixed-use development site. The dense and consistent residential blocks are quite far from any health or human service resources and available non-residential land is rather limited requiring everyone who lives here to drive to practically everything. The small parcel we identified would be appropriate for a new three-story building holding such functions as adult day care, a community health center, and a ground floor corner grocery store. The tenants of the existing building – the Old Adobe Union School District offices – could remain as a tenant, and the site is also adjacent to an existing park, an elementary school and children's day care center. This adjacency would leverage the potential for La Tercera Park for becoming part of a more vital neighborhood center on Crinella Drive.



Node 2C: Caulfield & Crinella

Node 3C: Casa Grande High School

This proposed development site works on a number of levels. First, the only significant socioeconomic disadvantage of this southernmost section of the East End is its poor access to a grocery store. Second, the large underutilized (seemingly abandoned) parcel adjacent to Casa Grande High School is nearly as big as Leghorn Marketplace, and lastly, Casa Grande Road itself is a very inhospitable high speed four-lane thoroughfare. A development on this site would address all these concerns by locating a small format grocery store towards the back of the development site flanked by low-rise restaurant and commercial pad sites with a two-story commercial building on Casa Grande Road. This development would be accessed by the much wider and tree-lined sidewalks that are recommended in this study. The upper office floors of this development could also bring health and human service functions to this neighborhood.



Node 3C: Casa Grande High School

Casa Grande High School node conceptual rendering.

The West End Nodes

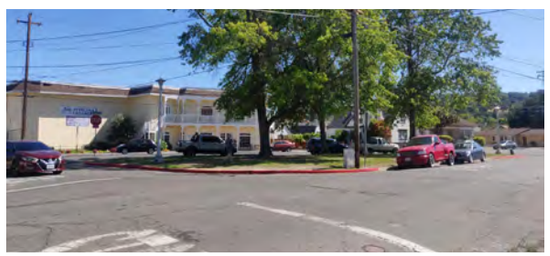
Node 2B: Petaluma and Magnolia

This node is not in a geographically optimal location being relatively closer to Petaluma's historic downtown that the others, but we highlight its potential to make the West End more walkable. There are already several commercial uses including a grocery store and a few restaurants as well as several underutilized industrial sites in this area. A zoning overlay district that increases the development floor area ratios and lifts zoning use restrictions could serve as a market signal as to the value of these parcels. Again, mixed use development here should give preference to health and human service functions and low-scale affordable housing. The structures such as grain storage buildings that are part of Petaluma's agriculture heritage should be maintained and celebrated as part of this node's identity.

Node 2B: Petaluma and Magnolia

Node 3A: Western & Baker

Again, although relatively close to Petaluma's historic downtown, this node also has great potential for making the West End more walkable. The restaurants and small market that are here are already destinations. If the large industrial building in this zone could be redeveloped in a way to create more active commercial storefronts along Western Avenue and space could be created to house more types of businesses, this four-block district could become one of Petaluma's most interesting mixed-use nodes.



Node 3A: Western & Baker

Node 3B: McNear Park

This being a relatively well-served section of residential Petaluma without easy development sites, we elected to leverage the popularity of McNear Park by suggesting low-impact development options. Noting that this is also a part of the city with relatively poor access to a grocery store, we chose to imagine food truck parking and pop-up farmers' market stands along G Street to include new commercial facilities for the baseball field. Another development partnership opportunity exists to find a place for a community health center or day care in new facilities for the adjacent Cavanaugh Recreation center.

Node 3B: McNear Park

Western & Baker node conceptual rendering.

The Midtown Nodes

Node 2A: Riverfront Marriott Circle

Equitable, accessible mixed-uses development on this site is critically important to Petaluma's goal of becoming a 15-minute city. The 15-minute walk radius from this point includes neighborhoods that have virtually no pedestrian access to commercial businesses, grocery stores, health and human service functions, or places of employment. And give that more residential developments are being planed around this node, it is vital that a mixed-use commercial center take hold here. They two keys for this happening are: development guidelines and access.

Development guidelines must envision this traffic circle surrounded with mid-rise mixed use commercial building and affordable housing. All ground floor uses must be active storefronts. A ground floor sublease space large enough for a small grocery store would be ideal; upper floor offices should favor health and human service uses. The circle itself should be re-planned as a hospitable public plaza.

Node 2A: Riverfront Marriott Circle

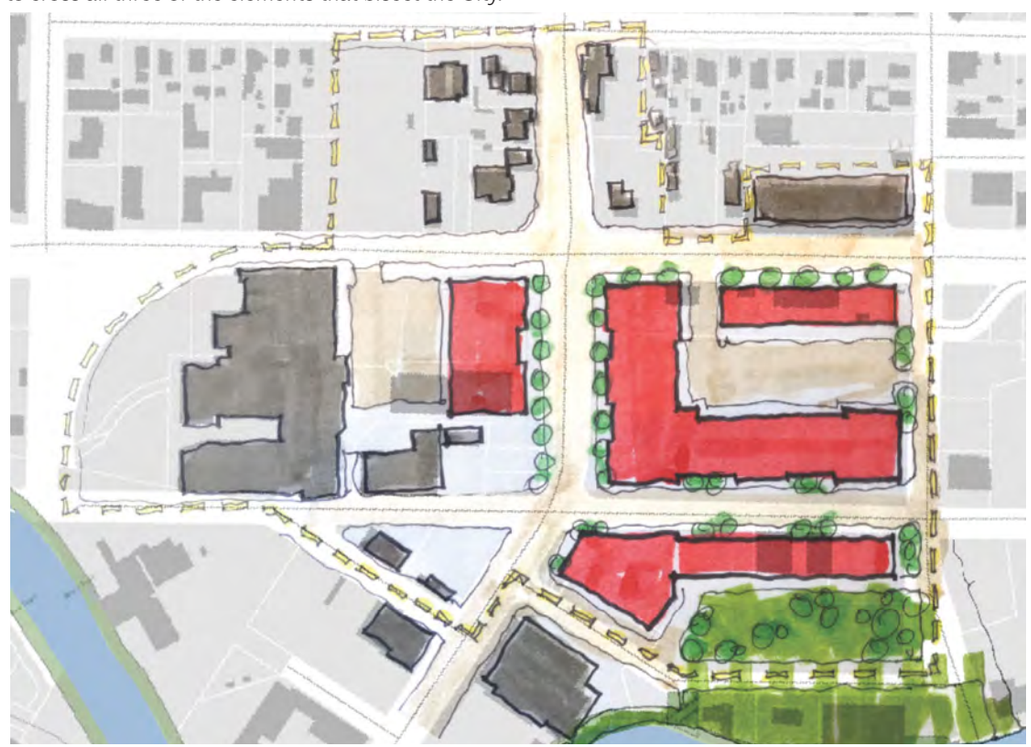
Pedestrian access to and from this space is very important. To serve the residents that live just across the Petaluma River, the bridge over the Petaluma River must certainly happen. Other pedestrian access routes to this site by residents on the other side of Highway 101 would also be beneficial. Finally, this plaza must also provide easy access to the Riverfront Park described earlier in this report.

Node 1A: Washington Street & Lakeville

Washington Street connects Petaluma's East and Wets Ends. It is also Midtown's Main Street. The large empty lots at this intersection are obvious development sites, but it should also be pointed out that the residential neighborhoods within a 15-minute walk of this node are also the most socioeconomically disadvantaged and environmentally impacted areas of the City. Serving the needs of these residents is critical to Petaluma becoming a more equitable and carbon-neutral 15-minute city.

This is the development node with the greatest potential to cross all three of the elements that bisect the City.

It would essentially extend the benefits of the historic downtown district to the East End and – when paired with the improvements to Washington Street described earlier in this report – make Petaluma a model for intentionally sustainable development. Two hundred affordable housing units could easily be planned for these sites all with walkable access to Riverfront Park. The five-story building shown in our rendering are the minimum development density and an overlay development district boundary could include commercial and industrial site for a block in either direction. There is no end to the health and human service functions imaginable on these sites along with space for many businesses.



Node 1A: Washington Street & Lakeville

Marriott Circle node conceptual rendering.

Washington & Lakeville node conceptual rendering.

Sites Not Studied

One of the most important considerations for making Petaluma carbon-neutral is reducing the vehicle miles traveled by both people driving into the City to work who cannot afford to live in Petaluma, and people driving out of the City for jobs that are not in Petaluma. This naturally creates a planning imperative to identify all feasible possible housing sites as well as many feasible office and light industrial sites.

May of these sites were identified in the Urban Land Institute's Technical Assistance Panel Report dated September 17-22, 2020. We agree that the many acres within the city limits currently occupied by shopping malls – especially along Washington Street – are ideal housing and commercial development sites. We find that many of our recommendations are compatible with those of the 2020 ULI TAP, but the assignment given to the AIA DAT was quite different from the ULI Tap's charge. These mall sites and their vast parking lots – as well as the Petaluma Fairgrounds itself – are not where the underserved and car-dependent residents of Petaluma live; simply stated, they were not relevant to our work.


Decarbonizing
Petaluma

Decarbonizing Petaluma

Context

In January 2021, the City of Petaluma, CA, adopted a Climate Emergency Action Framework (CEAF) outlining the principles to guide the City's response to climate change, including policies and implementation strategies to adapt, prepare and withstand the projected impacts of climate change.

As part of this framework, the City committed to simultaneously address both the climate and inequity crises, seeking to divest from systems counter to the shared vision of a healthy, sustainable and equitable community.

The vision and principles detailed in the CEAF were further reinforced by the Adopted Operating and Capital Improvement Budget for the fiscal year 2021-2022, in which COVID Recovery, Measure U Implementation and Climate Action, were identified as the "driving forces" behind much of the City's focus for the fiscal year. Specifically, the city budget identified Climate Ready 2030 as one of the top priority initiatives to be funded by Measure U revenues, considered key to help the city reach its goal of becoming a carbon neutral community by 2030.

Community Input

Attendees at the community workshop on August 5, 2022, specified several challenges, assets, and opportunities that informed equitable decarbonization recommendations for Petaluma.

Existing Challenges

- Inequitable treatment of and funding for East and West Petaluma
- Difficulty getting input from Spanish-speaking sectors of the community
- Reducing carbon emissions

Existing Assets

- Several existing programs—such as the Cool Cities Challenge--which are promoting sustainability and adaptation

Opportunities for Action

- Work on better healthcare access for all
- More solar panels and infrastructure
- Prepare and adapt to climate change

Recommended Actions

Prioritize Equity and Environmental Justice

Petaluma's Health and Environmental Justice Analysis (October 2021) offers a thoughtful and detailed description of Petaluma's Disadvantaged Communities[1], as required in California's Planning for Healthy Communities Act (CA SB-1000).

In compliance with CA SB-1000 and consistent with the General Plan and the City's focus on social and environmental equity, the City performed a Disadvantaged Community Screening Analysis based on three sequential methods: 1) CalEnviroScreen (CES) 4.0 index; 2) determination of disproportionate pollution burden in low-income areas; and 3) analysis of community-specific data to determine disproportionate impacts from pollution and other hazards.

According to Method 1 – combining 13 pollution burden indicators and 8 population characteristics – no census tract in the City of Petaluma has a CES 4.0 index score at or above the 75th percentile. In contrast, and as shown in Figure 1, Method 2 – which focuses low-income areas facing disproportionate pollution burden that may lead to negative health effects – identified one census tract (1509.01) and three census block groups (1506.01, Block Group 3; 1506.09 Block Group 2; and 1510.00, Block Group 2) as potential disadvantaged communities.

For Method 3 – which recommends the use of community-specific data to identify disproportionate burden from pollution and other hazards – the city relied on the CDC's Social Vulnerability Index to re-assess the results obtained using Methods 1 and 2.

Through Method 3A, the city identified tracts 1506.01, 1506.09 and 1512.01 Block Group 4, as to be "socially vulnerable" and to have a high pollution burden.

Through Method 3B, the city identified low-income census tracts and block groups with high social vulnerability scores, to compare them to additional indicators of health outcomes, built environment and environmental conditions. As a result, all socially vulnerable and low-income areas were identified as disadvantaged communities.

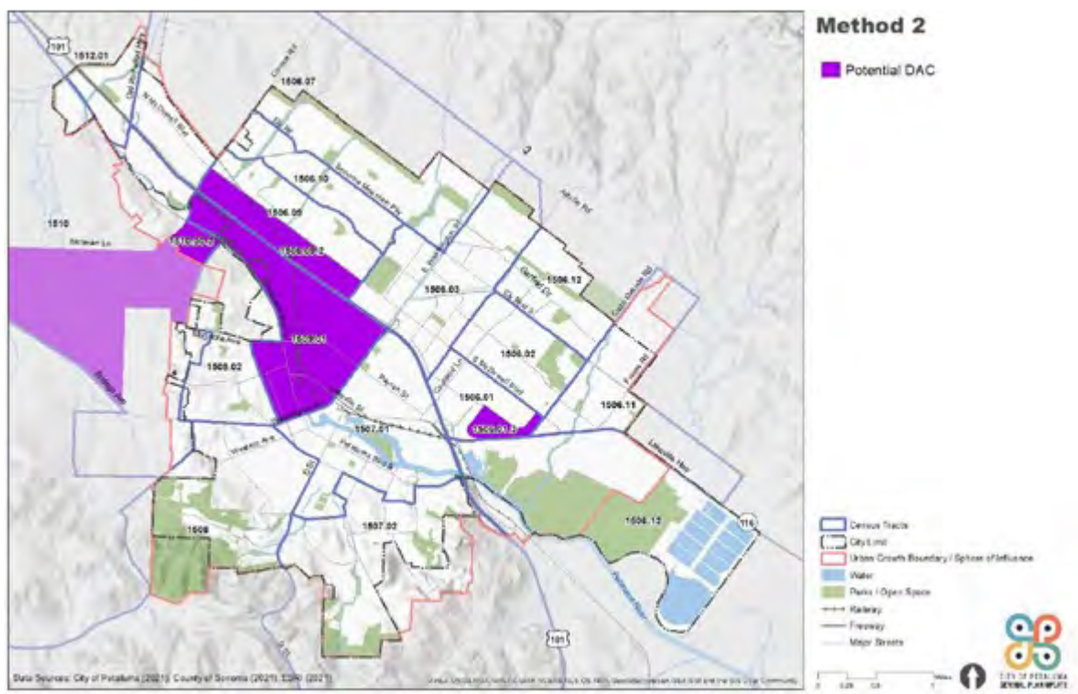


Figure 1: Method 2, Potential DAC.

1. Disadvantaged Communities are defined as geographic areas with a combination of socioeconomic hardship and adverse environmental or health conditions (CA SB-1000).

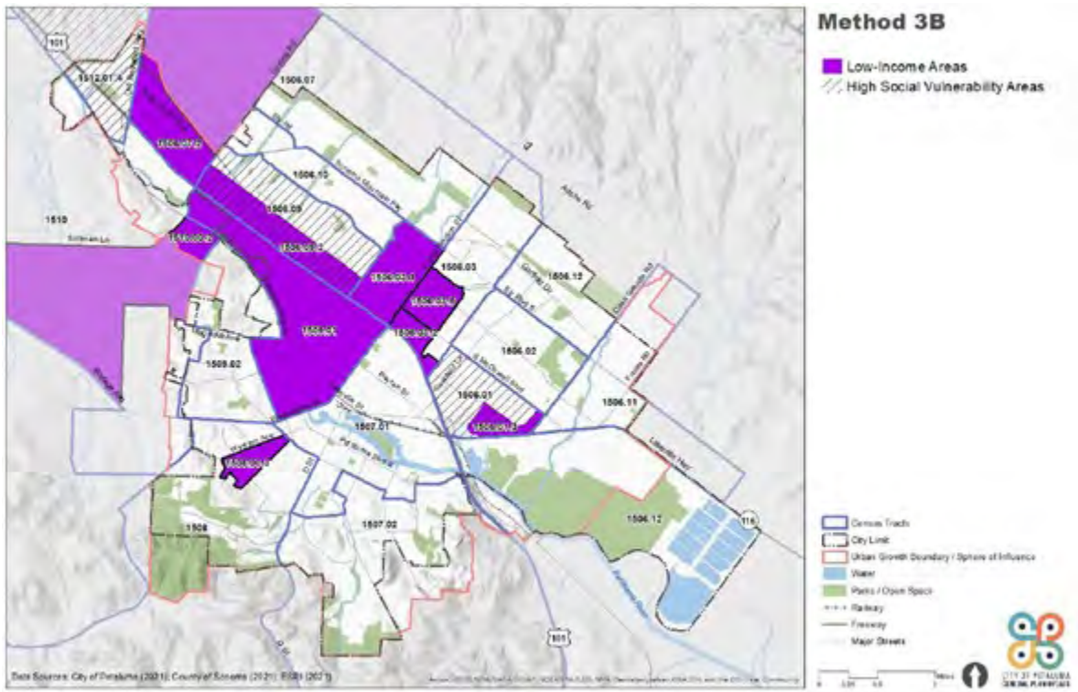


Figure 2: Method 3B results.

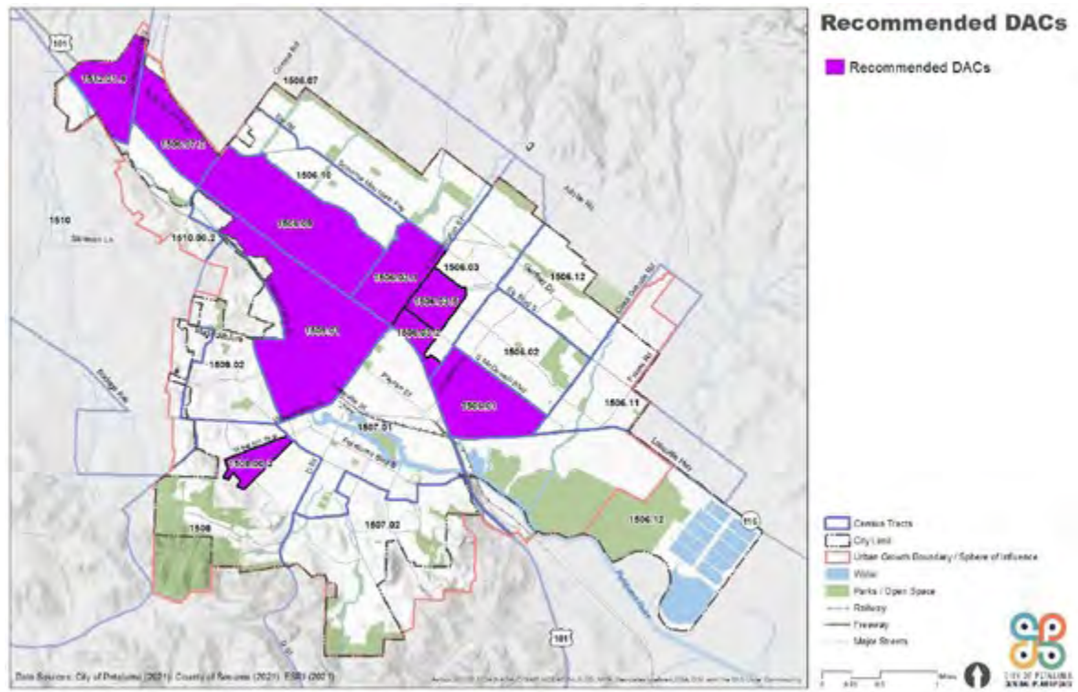


Figure 3: Recommended Disadvantaged Communities.

After combining all three sequential methods, the City determined three Census Tracts (1506.01, 1506.09 and 1509.01) and six Block Groups (1506.03, Block Groups 1, 2 and 5; 1506.07, Block Group 2; 1508.00, Block Group 3; and 1512.01, Block Group 4) as Recommended Disadvantaged Communities, as shown in Figure 3.

Areas of Opportunity

2020 US Census Undercounting

During 2020, the U.S. Census Bureau faced unprecedented challenges, including the COVID-19 pandemic, hurricanes, wildfires and the federal government's efforts to add a citizenship question and stop undocumented immigrants from being counted for apportionment.

At the end, the census count of more than 62 million Hispanics still missed 1 in 20, that is, approximately 5% across the board. This number could be even higher in areas where Hispanic overlap with undocumented immigrant groups, especially those in overcrowded housing areas.

Household Income Inequality

Petaluma's Income Household Distribution, which relies on data from the U.S. Census, American Community Survey, shows an affluent community with a median household income of $91,528, approximately 13% and 22% higher than Sonoma County's and California's median household income, respectively.

About 25% of households reported an annual income over $150,000, in contrast with 20% who reported less than $40,000. A simple statistical analysis may show a negatively skewed household income distribution, where more than 50% of households are at least a standard deviation from the median income, which can be attributed to income inequality among other factors.

COVID-19 Pandemic

The economic fallout from the pandemic continues to disproportionately affect some population groups, including lower-income adults, Hispanic and adults younger than 30[2]. In most cases, this has manifested as job losses and as a reduction in wages, negatively affecting household income. These disproportionate economic impacts reflect long-standing inequities in education, employment, housing, and health care, which when combined with other factors such as pollution burden and specific population characteristics, represent a threat multiplier under the city's Climate Emergency Framework.

In some cases, people who contracted the COVID-19 virus are experiencing long-term effects, known as long COVID. According to the CDC, people who experience

2. Pew Research Center.

long COVID conditions most commonly report tiredness or chronic fatigue, respiratory, heart, digestive and/or neurological symptoms. These conditions are real and may disproportionately affect those currently not considered "socially vulnerable", increasing the effects of pollution exposure, limiting both food access and physical activity, and disproportionately impacting cost-burden and overcrowded households.

Recommendations

1. Consider the US Census 5% undercounting of Hispanic population both in Environmental Justice and Health Analysis and in determining minimum participation requirements in civic engagement.

2. Consider income inequality as a function of income distribution's standard deviation for each US Census Block Group, also in contrast with Sonoma County's or the state's standard deviation.

3. Consider incorporating the compounded economic and health effects of long Covid in Methods 3A and 3B, including those whose ability to find employment or to increase wages has been limited by new long-term care and support responsibilities.

Revisit the Greenhouse Gas Inventory

According to Petaluma's 2018 Greenhouse Gas Inventory, the city emitted 472,422 metric tons of carbon dioxide equivalent (MTCO2e) in 2018, with transportation and buildings as the main sources of emissions, accounting for 67% and 24% of the total emissions, respectively (see Figure 4).

Energy from residential and nonresidential (including commercial and industrial) buildings was calculated by adding emissions from both electricity and natural gas services. Emissions from electricity, which accounted for 24,177 MTCO2e, were calculated based on the electricity emissions factor provided by suppliers, including PG&E, direct access, Sonoma Clean Power Start and Sonoma Clean Power Ever Green. Emissions from natural gas were estimated from activity data by applying an emissions factor. In total, emissions from natural gas accounted for 90,297 MTCO2e.

Community Sector	Subsector	Subsector $MTCO_2e$	Sector $MTCO_2e$	Percent of Total
Transportation	On-Road Transportation	314,493	314,493	67%
Energy	Residential	60,409	114,475	24%
	Nonresidential	54,065		
Solid Waste	Residential	12,669	33,137	7%
	Commercial	20,468		
Transportation	Off-Road Transportation	9,727	9,727	2%
Water and Wastewater	Water Use	73	590	0.1%
	Wastewater Treatment	517		
Total		**472,422**		**100%**

Source: RCPA 2018 Sonoma County Greenhouse Gas Inventory and Raimi + Associates.

Figure 4: Total Annual Community GHG Emissions (2018).

Areas of Opportunity

Scope of Emissions

The City of Petaluma's GHG Inventory combines Scope 1 and Scope 2 emissions to determine carbon emissions from energy use inside buildings. While consolidating Scope 1 and Scope 2 emissions may simplify reporting, it may also hide the specific impact of natural gas and associated methane emissions. The separation of Scope 1 and Scope 2 may provide a more accurate representation of the impact of emissions mitigation strategies, such as building electrification.

Fugitive Methane Emissions

There is new evidence that methane emissions from energy use inside buildings that depend on natural gas for cooking, heating or drying clothes, can be significant due to leakage, venting prior to ignition and burner malfunctions.[3] These methane emissions, spread over the structures that are hooked up to gas lines, may be cumulatively significant in terms of climate damage.

Advanced Methane Accounting

New advanced methane accounting for natural gas appliances[4] indicates that fugitive methane emissions, as a percentage of CO2 emissions calculated using activity data and emissions factor, may be estimated to be over 50% of total CO2 emissions. Should advanced methane accounting for natural gas appliances be used to estimate emissions from energy use inside buildings in Petaluma's GHG Inventory, emissions associated with natural gas alone would account for approximately 35% of the total emissions in the city.

Recommendations

1. Consider separation of Scope 1 and Scope 2 emissions in both residential and commercial buildings.

2. Consider advanced methane accounting (i.e. fugitive emissions) when calculating emissions from energy use inside buildings.

Focus on Mitigation and Sequestration

According to the City of Petaluma's Climate Emergency Framework, the City has established a series of goals to mitigate greenhouse gas emissions. Among those goals, the city has set out as top priority to eliminate emissions from transportation, energy use inside new and existing buildings and waste. It also includes the goal of reducing consumption emissions to the level necessary to meet the City's climate goals.

3. U.S. Methane Emissions Reduction Action Plan, The White House Office of Domestic Climate Policy, 2021.
4. Patricia M. B. Saint Vincent & Natalie J. Pekney. Beyond-the-Meter: Unaccounted Sources of Methane Emissions in the Natural Gas Distribution Sector. Environmental Science & Technology (2020).

Areas of Opportunity

To effectively reduce greenhouse gas emissions from economic activity, the City of Petaluma needs to assess the impact economic activity, as of today, has on climate change. For this, three metrics are useful: energy intensity[5], carbon intensity[6] and energy-related carbon emissions, which when combined with population and GDP per capita are known as the Kaya Identity[7].

When substantial reductions in energy intensity and carbon intensity occur, as in the first year of the COVID-19 pandemic, then the only reason for emissions to increase could be attributed to changes in population and the redistribution of organic and material waste.

While the City of Petaluma has managed to reduce carbon intensity by increasing participation of clean electricity through Sonoma Clean Power, it still needs to address emissions from natural-gas powered energy use inside residential and non-residential buildings. This is of specific importance in the short term when considering 20-year global warming potential of fugitive methane emissions[8].

According to the White House of Domestic Climate Policy, building electrification represents the most effective solution to address emissions from energy use inside buildings. The US DOE recently launched a national initiative focused on deploying clean and efficient building heating and cooling systems, and for the development of new appliance and equipment standards to advance heat pump technology and induction stoves.

Even though transportation is the number one source of carbon emissions for the City of Petaluma, it is important to recognize that a strategy focused on the replacement of internal-combustion engine vehicles may not be immediately viable. However, a strategy focused on reducing number of vehicle miles traveled (VMT) and increasing the overall efficiency of the city's transportation systems, may lead to a substantial reduction in carbon emissions.

It is our estimation that by **Reimagining Mobility** and incorporating the recommendations to **build 15-minute neighborhoods**, the City could eliminate as much as 25% to 30% of its transportation-related emissions.

5. Energy used per unit of GDP.
6. CO2 emissions per unit of energy.
7. U.S. Energy-Related Carbon Dioxide Emissions, 2020, EIA, December 2021.
8. https://www.epa.gov/ghgemissions/understanding-global-warming-potentials

Recommendations

1. Electrification: Consider as top priority the electrification of residential, commercial, and industrial buildings, assessing the City's current needs in terms of capacity and infrastructure, and the economic benefits of scale and co-deployment of technologies such as solar, energy storage and EV charging infrastructure.

2. Energy Intensity in Transportation: Consider a holistic approach to an integrated, multi-modal transportation system, seeking to maximize efficiency and reduce VMT in passenger vehicles. Further incentivize the transition to electric vehicles by deploying both Level 2 and Level 3 charging infrastructure, considering equity, accessibility and affordability in its design and deployment strategy.

3. Enabling Infrastructure: Prioritize work with the distribution utility company to model future electric loads and anticipate necessary infrastructure upgrades, considering a phased approach to electrification, also considering fluctuations in efficiency of batteries and heat pumps.

4. Data Collection and Flexibility: Prioritize data collection (smart meters and thermostats), grid flexibility and interactivity, while designing resiliency measures such as microgrid interconnection, in coordination with the distribution utility company.

5. Workforce Development: Determine skill and capacity development needs, considering potential job and career pathways for disadvantaged communities, including other vulnerable groups such as undocumented immigrants, formerly and currently incarcerated.

6. Regional Cooperation and Support for Wraparound Services: Develop a multi-regional approach to workforce development support, including wraparound services such as child-care, transportation, language support and employer certification, in collaboration with Sonoma County and other municipalities near Petaluma.

Financing:

1. Develop a strategy to increase private and philanthropic participation for the development of affordable energy efficiency and electrification financing options.

2. Rely on the state government and philanthropic organizations to provide city-wide loan loss reserve and loan guarantees for low-income individuals, as well as those without or with a limited credit history, expanding access and participation of disadvantaged communities.

3. Use the government's convening power to enable industry consolidation, scale and bulk purchasing power.

4. Develop a strategy to aggregate small-scale electrification projects, in order to incentivize participation of private investors, including local credit unions and CDFIs, in the development of a comprehensive solution to upfront and minimize capital expenditures.

5. Consolidate state and federal incentives to maximize efficiency in incentive, grant and rebate allocation, and to reduce the overall cost of capital.

Develop an Adaptation and Social Resilience Strategy

As the City of Petaluma begins to plan and prepare for the immediate and long-term impacts of climate change, it also seeks to develop an adaptation and resilience strategy, capable of forecasting and addressing the simultaneous and compounding effects of current and future economic and health crises.

In the case of disadvantaged communities, climate change impacts can take the form of threat multiplier, especially in those communities already disproportionately experiencing the effects of the current global economic crisis or the prolonged health and economic effects of the COVID-19 pandemic.

Recommendations

1. Consider developing a strategy to address BOTH climate adaptation and economic resilience, focusing on bolstering the city's ability to withstand the effects of climate change – including flooding and fire risks, heat waves and uncharacteristically cold winters – and anticipate the subsequent economic shock.

2. Promote business continuity, preparedness and the development of a resilient workforce and skill training programs, to mitigate the individual and regional impacts of industry and core employment shifts, following the compounded effects of climate change and economic downturn.

3. Establish information and knowledge networks, focused on education and preparedness, with the objective of boosting pre-disaster recovery planning and developing post-disaster responsive capacity.

4. Increase local short-term responsive capacity to predictable climate events such as heat waves, uncharacteristically cold winters, flooding and fire, by developing multiple city-managed cooling centers and winter shelters within 15-minute neighborhoods.

Standardize Community Engagement

According to the Climate Emergency Framework, “the Climate Emergency Resolution has elevated community engagement on climate change to a top policy and planning priority.” A process of democratic engagement, focused on increasing participation of vulnerable groups and disadvantaged communities, may lead the City of Petaluma to a comprehensive community engagement process, where all members of the community may share a common sense of purpose and ownership of the potential solutions to the climate and economic crises.

Recommendations

1. Strengthen democratic engagement by promoting bottom-up citizen participation (as opposed to a top-bottom approach driven by government), allowing for residents of the city to first informally, and then through a formal process of engagement, drive community participation in the definition, design and implementation of policy programs.

2. Enable community-based organizations and community champions to fully represent vulnerable groups, including disadvantaged communities and communities by affinity, to voice their concerns, articulate their needs and help accelerate community wealth building.

Financing a Greener Petaluma

Financing a Greener Petaluma

A path to Implementing a 15-minute City

As a smaller city, Petaluma has enjoyed a range of attributes lacking in many of its peer cities. Among these are retaining and maintaining a vibrant historic downtown; having a variety of industries, businesses and entrepreneurs; a river flowing through the central city; and access to mountains and world acclaimed vineyards and wineries.

It also has challenges, including having such a high cost of living that most of it employment base has to commute in from elsewhere; a growing Latino population that is more economically disadvantaged that the larger majority population; infrastructure that isn't people friendly (such as wide streets that carry abundant and rapid vehicle traffic); and insufficient shade from increasingly hot sunny days.

Fortunately, city leadership, many community residents, and businesses recognize that there's a need to craft a more sustainable, equitable, people-first city, one that improves both the natural and physical environment in addition to offering greater opportunities to house and employ residents across the socio/economic spectrum. As Dr. Martin Luther King observed, "The time is always right to do the right thing". For Petaluma, that time is now.

The city is already making progress in doing the right thing. It has prepared an abundant, robust data base about current conditions with regards to the economy, housing, and environment (as well as other factors.) These documents, as well as various available white papers, provide a reality check of where Petaluma is today – which is well ahead of many cities, small and large.

Doing the right thing by the environment (both natural and built) and ensuring a more resilient economy for current and future residents of all backgrounds involves:

- A City leadership committed to a long-term improvement agenda (implementation of which is phased);
- Community input into crafting a vision for the future and maintaining support for the approved vision;
- Identifying and securing private, institutional, and non-profit partners willing and able to collaborate in both short and longer term built and natural environment sustainable and equitable improvements/opportunities;
- Having sufficient, capable public agency staff who collaborate on agreed upon priorities and can execute a variety of policies and programs;
- Identification of vacant and underutilized sites (public and private) to accommodate desired sustainable growth;
- Developing measurable, realistic markers for achieving objectives, recognizing that unexpected conditions (recessions, inflation, natural disasters) are always possible and will require adjustments to these markers;
- Embracing and being willing to use a robust development funding tool kit and other creative land use options to achieve envisioned outcomes.

Current progress & ingredients for next steps

The city has already begun to position itself to achieve a more sustainable and equitable future. A number of environmental and economic justice/equity efforts have been launched, as noted in the city's draft general plan and other documents. Leadership seems to be generally on board to more aggressively pursue this type of future with the community. Working toward a 15-minute city is one of the tracks that leadership has expressed interest in achieving. To advance this agenda, it will need to better refine and prioritize its objectives and craft policies as well as funded programs to help achieve this desired future. Essential implementing partners in the private, non-profit, other public agencies (county/state), institutional sectors in addition to inclusive community representation also need to be incorporated as key actors as each of these sectors offer needed assets (e.g., land, funding, education).

Incrementally implementing a 15-minute city plan

The DAT team has produced a very ambitious set of improvements and draft concepts that can help guide Petaluma's deliberations about solidifying clear objectives and priorities to advance the realization o a 15-minute city.

Achieving a 15-minute city will also necessitate making a range of significant public and private financial investments in addition to regulatory changes along with required community outreach (to assure that the projects and programs being proposed are viable and benefit the constituents they're intended to serve).

This report section focuses largely on funding options that Petaluma may not be currently employing, may not be utilizing as extensively as it could, or that it may have tried formerly without success. It also suggests exploring alternative land use approaches and potential options for denser multi-family affordable rentals and moderate-income home ownership, as well as start-up or micro commercial spaces. The funding option list presented is not exhaustive but offers a wide array of potential resources.

Feasibility filter

In determining which if any of the alternative resources could be useful in Petaluma's pursuit of more sustainable, equitable 15-minute city, it would helpful to assess each option with a feasibility filter to assist in determining whether it merits further pursuit. One such filter is offered below. You may choose to use/modify some of these elements or create a different set that better meets the needs of leadership and the community.

- Legality. If the tool is currently prohibited by state statute, then there is often a very large administrative hurdle to be surmounted up front. All the benefits of a funding mechanism are negligible if the mechanism is not legal or cannot become legal within a desired timeframe. Even for mechanisms that are legal, the likelihood of legal challenges adds to the cost of implementing them.
- Efficiency. The usefulness of a funding mechanism is dependent on how much revenue it can generate (capacity), when the revenue will be available for use (timing), how easy it is to collect the revenue (administrative ease), whether it will avoid large fluctuations in collections (stability), and how many types of projects can be funded by it (flexibility).
- Fairness. A simple definition of fairness in public finance is that users should pay for benefits they receive or costs they impose, unless they are in groups that have been singled out for special treatment (e.g., low income, elderly, physically and/or socioeconomically disadvantaged). Fairness may also be defined as requiring a nexus between fees imposed on development and the expenditure of those fees. Fairness is a judgment call.
- Political/Community Viability. The adoption of funding tools requires an enactment by elected officials, and the usage of a tool may require voter approval for the tool and/or each project. Thus, community input, public opinion and perception of the funding mechanism matters for implementation. Political viability is also a judgment call.

We realize that the city has been aggressively pursuing various state grants and other competitive resources – which it should continue doing. For the most part, these sources are not included here as the city is already familiar with them. It's also important to keep in mind that many of the sources listed can be blended on differing projects to optimize project viability.

Recommended Funding Sources

Alternative Funding Sources

Requirements, Fees, and Taxes

Petaluma already has funding and financing tools that rely on land and building values (e.g., property tax, building permit fees) to fund government expenditures. Some one-time fees or taxes relate to change in real estate values, while others collect regular payments based on land values. Moreover, there are non-financial requirements that restrict how land can be used. There also are funding tools that are or may not be used in Petaluma but have been adopted by other cities and counties.

Construction or Building Excise Tax

This is a tax on the permit value of new construction which goes above and beyond permit fees that recoup the cost of staff review time. This tax captures part of the value of new construction which is then used to fund public priorities such as affordable housing and public facilities (e.g. streets/sidewalks, open spaces). The tax revenue this generates is flexible and does not have to be closely related to the actual cost of providing public facilities to serve the development, nor does it have to be spent to specifically benefit the properties being taxed. It can be very effective for denser sustainable multi-family mixed-use projects, and commercial development projects.

Sole Source Impact Fees

Petaluma currently collects impact fees that are imposed on new developments by local government for the purpose of providing new or expanded public capital facilities required to address the additional demand from the new development. This fee income is allocated for citywide infrastructure improvements. In some states, sole source impact fees provide an option that enables the impact fees to be allocated to a smaller geographic area which could be a few to a few hundred acres depending on the development project. These fees are most often used for denser development projects and can be applied to park and other open space development as well as hard infrastructure in the impact fee generating area.

Land banking & Community Land banks

Land banking and community land banks benefit the surrounding communities by removing land from the market and preserving it, ensuring the availability of long-term affordability and land access (e.g., parks and other public spaces). Petaluma already has one or more non-profit land banks, which are a strong asset. Community Land banks add a significant dimension of enabling affordable housing tenants and condo/coop owners to share in wealth creation generated by leasing some of the land for market rate housing or commercial facilities. Acquiring and holding land in prime locations, such as sites that may no longer be used by school districts, hospitals or counties (e.g., the fair grounds) could enable considerable affordable multi-family, mixed-use development and public open space development. Larger sites may provide a very significant opportunity for economic equity; a focused community land banking demonstration project for public open space could also be incorporated.

Moderately Priced Dwelling Unit (MPDU) Requirement

Petaluma currently has inclusionary zoning the requires developers to either provide a percentage of affordable rental units on site or pay a fee in lieu. MPDU requirements address inclusionary zoning programs with the goal of providing affordably priced townhomes and condominiums – both new and resale – to first-time homebuyers who have a moderate household income. This type of requirement would ensure that condo developers would be adding ownership opportunities to workforce household.

Parking Fees

Parking can be either off-street parking in the form of garages or lots and metered on-street parking. Revenue generated could be appropriated to fund public improvement projects. One example is the use of parking fees to help fund a core area streetcar line.

Public Land Disposition

Public land that is not already programmed for other uses (schools, parks, firehouses, police stations, etc.) could be sold or leased to developers to help achieve development objectives. For example, this land may be developable as sustainable mixed-income housing once it is sold or leased to a developer. The public agency owning the land can place conditions on uses, but this process can still increase land values as underutilized properties are redeveloped, thus stimulating local real estate markets. It can be employed to test demonstration developments such as using mass timber construction, or for mixed-use projects requiring affordable ground floor commercial spaces. If the latter conditions are required, the land price or lease cost may be reduced to enable the desired outcome, and other tools mentioned in this report may be needed.

Land Swaps

The City is fortunate to have control of many acres of land. This situation puts the City in a position where it can, if it and a willing private party have interest, swap ownerships for sites that the city believes would be better for it to control while still providing a fair value exchange of property with the current private owner. This alternative may be beneficial in moving toward implementation in the City's SMART area as well as waterfront redevelopment interests. It may be in the best interest of both the City and the private owner of the SMART area parcel for the latter to swap for other public land and let the City proceed with redevelopment of both SMART parcels. Swaps may also be beneficial for the waterfront redevelopment so that denser mixed-use projects can be developed there along with a protected waterfront and public open space. Both public and private parties would need to complete due diligence on the parcel exchanges and work to achieve fair values for their properties based on appraisals.

Targeted Transient Lodging Tax

Petaluma already has a Transient Occupancy Tax that must be used to promote tourism and tourism related facilities. Some cities add a targeted lodging pertinent element to these taxes. This added increment generates more tourist revenue that could be used for broader goals around equitable economic development and/or housing affordability – both of which benefit service tourism service workers among others.

Development Incentives Combined with Requirements or Fees

Changes in land use, development rights, or infrastructure can make certain areas more desirable for development. Petaluma and Sonoma County governments can capture the value development incentives create by combining them with certain requirements or fees. Public policy goals can be more easily achieved with the revenue generated from the fees if the development incentives are large enough to result in more valuable development.

Fee for Development Rights

If allowed by law, developers can have the option of paying fees to access additional development rights, such as an increase in allowed density, a reduction in parking requirements, or ground/air rights (the latter of which may be transferable). These development rights could make projects more feasible. A portion of the added value is captured in the form of fees, which can then fund public infrastructure, or be directed toward off site affordable housing, or equitable economic development activities.

Public Benefits for Development Rights (e.g.: Right of Way Contribution)
Developers may access additional development rights such as a density bonus or an expedited permitting process by contributing privately or publicly owned land that is needed for the public infrastructure. The contribution can include right-of-way areas, facilities to support transit services, bike lanes, etc. The government is required to negotiate with the developer on the terms of the contribution. Petaluma may already be engaged in utilizing this program. A new program like the MPDU can also be considered a form of public benefit that can be required for additional development rights.

District-Based Strategies

When the benefits of a public investment are reasonably limited to a specific geographic area and the benefiting entities can be easily identified, local governments can establish special districts from which new funding sources can be generated. The creation of these districts and their boundaries are often dependent on the development potential. Once a district is established, its landowners pay assessments or taxes that finance the costs of projects that generate shared benefits. The assessments or taxes may be proportional to the estimated share of benefits each entity receives.

The establishment of a special district and the funded projects within it creates value that is reflected in increased real estate prices. Capturing a portion of the increased value is necessary to finance the projects and even fund other projects. If these projects would otherwise not have occurred or would have required public funding, they can be considered public investments.

Special Assessment Districts (e.g., Business Improvement District, Community Improvement District, Local Improvement District)
Special Assessment Districts involve the creation of districts that generate tax revenues from properties that benefit from a public infrastructure improvement. In general, businesses or new developments in the designated area would pay special assessments in addition to existing taxes to fund new public infrastructure. Petaluma already has a BID, and state enabled Mello-Roos special assessment districts can be used to pay for an array of public improvements in such districts but we understand that these have been difficult to use since the added assessments passes on with property sales until the bonds are paid off. They may however be more viable for denser multi-family development projects that would benefit from various public improvements (e.g., open spaces, bike paths, street trees).

Tax Increment revised funding
California now offers a range of incremental tax investment options to replace the recently extinguished Urban Renewal District TIF program, including Community Revitalization and Investment Authority, Infrastructure Financing District, and Enhanced Infrastructure Financing.

Infrastructure and Refinancing District
We understand that Petaluma currently has a Community Revitalization program but it relies only on collecting the City's portion of incremental growth so it doesn't have ample funds. It may be worth exploring the other tax increment options in conjunction with the county assuming that the latter can be convinced of the larger benefits that it can bring to that jurisdiction. Funds can be used for affordable housing, public infrastructure (e.g., bike lanes, street improvements such as road diets, parks). (See appendix 1 for more on these options)

State enabled and other funding tools

There are a range of tax-exempt development funding tools offered by the state. Petaluma developers are likely already tapping into some of these such as the Low Income House Tax Credits. Other programs are geared toward enabling more sustainable housing development. A few of these are listed below.

501(c)3 tax exempt Bonds
501(c)(3) Tax Exempt Bonds (issued by the California Finance Authority) are revenue bonds issued at tax exempt rates for a range of tax-exempt uses that can include eligible medical facilities, senior housing, for and non-profit lower and moderate income housing, etc. The key benefit of this funding source is that these bonds can pay for up to 100% of the development costs which means that a project doesn't have to have expensive equity requirements which increase project costs. Projects do need to have sufficient revenues to repay the bonds.

C-PACE sustainable development financing
C-PACE is a program that offers financing for multifamily development projects that utilize sustainable building materials (e.g., mass timber, solar roofs, energy efficient windows) in an effort to reduce carbon footprints. C-PACE financing covers 100% of the developmental hard and soft costs for market rate or mixed-income multifamily projects, thereby reducing the developer's need to secure expensive equity. Based on recent discussions, it appears that this program is either being used very little or not at all in Petaluma even though it's listed in the tool kit. Finding ways to promote the program among lenders, developers, and relevant city personnel could enable the development of more sustainable housing.

Crowd Funding
Crowd funding is a collective effort by individuals to raise funds for a variety of causes, projects or business ventures they care about. Crowd funding, whose participants are often solicited via the internet thereby casting a wide but inexpensive network, has been used for help to fund start-up businesses, political campaigns, and development projects. Recently, a small town in Wales raised over $1million to finance a community center. It has also been used to raise funds for sustainable office and housing developments. Depending on the project, crowd funders may or may not necessarily seek a direct return on their investments.

Additional Needs to help achieve a 15-minute city

Working toward a more sustainable and equitable 15-minute city will benefit from enabling other changes. A few are listed here.

- Parking code changes. To help achieve higher density housing on urban sites, parking ratios need to have lower maximums. The current 2 spaces per unit requirement makes the development of 5 and 6 story housing projects with active ground floor uses very difficult. Petaluma currently has achievable rents to support higher density building but these will be more possible to construct with a parking maximum of 1 space per unit. We understand that Petaluma is considering this and strongly suggest that it be codified.

- Enhancing mass transit capacity and ridership. It would be useful to find ways for the existing mass transit agencies to create a seamless transit system amongst them. This could take the form of developing one unified "ticket" that can be used for any of the current operating systems. Providing subsidized tickets by public and private employers would be helpful in both enhancing ridership and reducing single use auto traffic. This would better enable devoting more right-of-way to bikes.

- Explore innovative programs with ride sharing entities. This can take the form of having private and public employers enter into contracts with ride sharing services for a reduced cost to the employees.

- Assess the potential for Co-op housing. Co-ops have been around for many decades. They can provide a more affordable form of ownership in multi-family buildings. Homeowners purchase

shares in the building rather than purchasing a given unit fee simple. While cities like New York have very high-end co-ops, other smaller cities have co-ops for moderate income households.

Moving Forward

Moving Forward – Turning Aspiration into Action

The team acknowledges that the recommendations presented within this report are ambitious; if they were easily achievable, Petaluma would have undoubtedly already accomplished them. Community leaders explicitly charged the DAT to produce an aspirational vision, and the team attempted to rise to that challenge. The time the team spent in Petaluma revealed the city to be an innovative, ambitious place, filled with motivated and savvy community members. The initiative and grassroots leadership shown by the group of volunteers who sought out and brought the DAT to town are indicative of the overall community commitment towards positive change present within Petaluma. The onus for the implementation of the community's vision cannot and should not fall simply on the shoulders of the city government; the community must be involved every step of the way. The power of an intensely motivated group of engaged citizens should never be underestimated, and by harnessing that energy the team sincerely believes that Petaluma can go well beyond the recommendations present within this report, becoming an inspiration and case study for other communities with similar ambitions.

Next Steps

Prioritize Implementation Efforts

Petaluma has a number of neighborhoods that already function as 15-minute areas or that are lacking only a few elements to fully meet the criteria. Likewise, ongoing efforts to decarbonize the city and improve transit and connectivity are resulting in positive change. To continue building and expanding the momentum of these efforts, the community needs to prioritize projects. The people who best know which projects should be given precedence in order to achieve Petaluma's larger goals are already in the community: City leaders, community residents, business folks, and staff, among others. Petaluma is entirely capable of enhancing ongoing and generating new endeavors.

To help decision makers make more informed decisions about where and what to do next, it may be useful to offer some criteria that can be used to make these decisions.

Criteria to Consider in Choosing Projects

The following are factors that should be considered for various types of projects that can help advance Petaluma's objectives.

- Engage committed partners for selected larger scale endeavors (private, non-profit, institutional, other public entities.)
- Engage community members (residents/businesses) early in the process, particularly in larger scale projects. Allow the community to help prioritize endeavors.
- Identify the greatest needs where you can make a beneficial impact.
- Are the economics of the project viable with existing public/private resources or will it require new ones? If the latter, how readily can these be secured?
- How much risk are you willing/able to take – particularly on larger projects?
- Each significant project needs dedicated staff. Larger projects may also mandate interdepartmental and/or agency commitments
- Find initial projects that can be done relatively affordably and expeditiously, and that have visible positive impact.
- Find public improvements that will help leverage additional private investment (e.g., street trees leveraging building façade improvements).

Getting Started: Tactical Projects and Programming

Everything Petaluma does should reinforce the community's identity, values and aspirations for the future. There are many examples of simple people-friendly interventions that Petaluma can engage in to promote the realization of its vision and to continue building the engagement of its citizenry. Some of them require virtually no resources, while others require volunteers, materials, and modest financial commitments. The following examples are illustrative, but Petaluma should decide what it might take inspiration from and create its own unique path that fits the community identity.

Many small-scale interventions can use existing industrial/waste materials and volunteers to build opportunities for public gathering and a stronger, people-friendly public realm. For instance, "chair bombing" has become a popular phenomenon in many communities. Chair bombing involves using donated wood pallets to build chairs and then program a public area as a people-friendly gathering space, especially in neighborhoods that do not already have any such easily accessible amenities. These kinds of creative ideas are easily scalable. In Christchurch, New Zealand, volunteers came together to build the "Pallet Pavilion" as a public gathering and event space following an earthquake event that left many properties vacant and in need of activation. In Houston's Fifth Ward, local artists gathered lumber from housing demolitions and built the "Fifth Ward Community Jam", a small amphitheater which quickly became the main civic space in the neighborhood and is programmed for community events throughout the year. These interventions do not require a tremendous amount of physical space and can

be easily scaled to fit into any underutilized corner of a neighborhood. Each neighborhood could design and implement its own distinctive installation, thereby further enforcing their own unique identity within the larger community. It's also an accessible and fun opportunity in which to engage residents of a neighborhood who are perhaps otherwise less inclined to participate in public processes.

In Tampa, locals organized street festivals to reclaim the public realm for people and test new ideas regarding street design. Through the Better Block initiative, communities all over the world have engaged in community-driven pop-up street design interventions to reclaim public space and create a more human-friendly neighborhood context. These temporary interventions can serve as proving grounds to test for future more permanent improvements to the public realm. In Philadelphia, officials remade their industrial waterfront with seasonal pop-up parks, filling the spaces with gathering areas, music, food and games. The Spruce Street Harbor Park serves the community in the summer, with hammocks and industrial containers used as vendors. The WinterFest program takes over in the colder months. Both programs have been so successful that they have transitioned from pop-up parks to perennial seasonal offerings that enliven the area and produce economic benefit.

Neighborhood residents should try out ideas, let their collective imaginations run wild, and channel their inspiration. The beauty of small scale temporary interventions is that if experiments don't work out or are deemed impractical, it's easy to move on to a new idea. Community leaders should beware the reflexive "no" that might greet ideas; the communities that use innovation and pursue out-of-the box ideas or seemingly audacious goals are often the pioneers who develop the solutions of the future.

Case Studies in Community-Led Development

Port Angeles, Washington

Port Angeles, Washington provides an example of how to inspire pride in change by creating a truly public revitalization process. Their success has been built around involving everyone in the process. In 2009, Port Angeles hosted an AIA team to focus on downtown revitalization and waterfront development. Port Angeles had suffered declining fortunes as the result of mill closures and reduced productivity from natural resource industries. It also lies at the gateway to America for people entering from Canada, and at the gateway to the Olympic peninsula and its national parks. Historically, it was home to dozens of indigenous peoples as well.

The approach that Port Angeles took to implementation opened up broad participation from the entire community. "Just two weeks after the SDAT presented more than 30 recommendations, the Port Angeles Forward committee held a public vote and unanimously agreed to recommend 10 of those items for immediate action," said Nathan West, the City Manager. "Public investment and commitment inspired private investment, and, less than a month later, the community joined together in an effort to revamp the entire downtown, starting with a physical face-lift. Community members donated paint and equipment, and residents picked up their paintbrushes to start the transformation." An immediate idea came directly from the community. Volunteers banded together to give 43 buildings downtown an immediate face-lift, and the momentum was born.

This effort led to a formal façade improvement program that extended the initiative exponentially. The city dedicated $118,000 in community development block grants for the effort, which catalyzed over $265,000 in private investment. The city also moved forward with substantial public investment in its waterfront, which had a dramatic impact in inspiring new partnerships

and private investment. Within 5 years, Port Angeles had over $100 million in new investment downtown, including an award-winning waterfront that draws people back to the downtown. In June 2012, Port Angeles was recognized with a state design award for its waterfront master plan. The city completed construction of phase 1 in 2014, and launched phase 2 in 2015. Today, major new public facilities are found on the waterfront, including an arts center and a cultural center dedicated to the indigenous peoples of the area and their history.

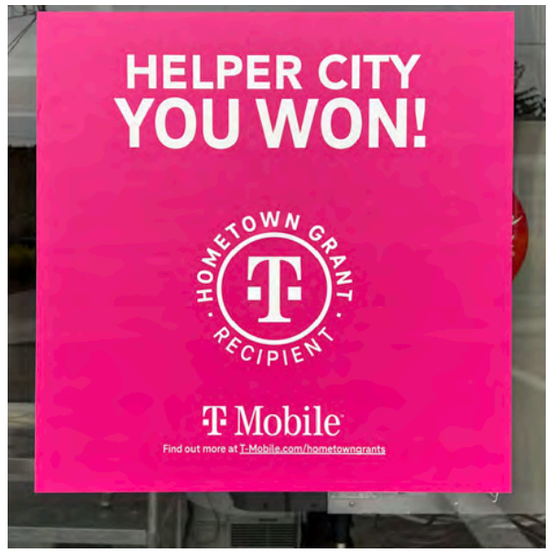
Helper, Utah

Helper City, Utah was incorporated in the late 19th century as a result of surrounding mines and the railroad, which runs through town. It developed a thriving local mining economy in the early 20th century. The town got its name from the 'helper' engines that were stationed at the mouth of the canyon to assist trains in reaching the Soldier Summit up the mountain. The natural resource economy began to suffer economic decline over the past 20 years, and in 2015 the Carbon Power Plant in Helper was closed. It had been in operation since 1954. The economic impact resulted in de-population and increased poverty, putting a strain on resources and capacity. The population of the town is 2,095, and the per capita income for the city was $15,762, with almost 13 percent of the population living below the poverty line. In September 2017, Helper City hosted an AIA Design Assessment Team to build a community-driven strategy for its downtown. Over 200 people participated in the process, which produced a 53-page report with recommended implementation strategies that focused on strengthening the public realm, activating the downtown and enhancing the historic fabric. At the conclusion of the process, one citizen stood up and declared, "You've given us hope."

In the first year of implementation efforts, the town of 2,000 mobilized hundreds of volunteers in a grassroots effort to remake the public realm and activate downtown. Citizens were involved directly in a series of hands-on projects that included the redesign of Main Street, pop-up retail stores, redesigned public parks, restoration of the riverfront, and other initiatives. They also enhanced programming downtown with successful arts festivals and related events. The impact has been transformational, stimulating private investment and momentum for positive change. Helper City Mayor Lenise Peterman notes that '"The plan created from the SDAT event is driving continuous improvement in Helper City. By giving voice to the community, we have also given it hope in creating a sustainable environment which is respectful of our past, values our environmental assets and maximizes the opportunity for community engagement."

Recently, Carbon County leaders hired a consultant to do an assessment of the entire jurisdiction. Regarding Helper, he had this to say: "I have never seen a community like this. You guys are the poster child for how to get things done...We really believe Helper is setting the Gold Standard for Utah." That sentiment is felt locally as well. The Mayor and Steering Committee wrote that "The three-day immersion by the DAT team has impacted, and continues to impact, our community on a daily basis. People in our community have something they haven't had for some time, hope for a sustainable community. Key tenants of creating that sustainability include replenishing human capital (drawing young families to our city), caring for our environmental assets, and finally recreating an energy-based economy to a destination based one. And we are doing just that – everywhere in Carbon County people say it's happening in Helper" – and it is!" Helper is living up to its namesake and living its motto, "The Little Town that Can." As one local report noted, "Within the last 18 months, all but one of the available buildings on Main Street has been purchased and has undergone some degree of renovation."

In 2018, Helper was recognized with a Facilitation Impact Award for its revitalization efforts. As Mayor Lenise Peterman wrote, "The SDAT program was the catalyst for what we have done and is the road map for what we will do to create our best version of a sustainable community. The community, at the final presentation during the SDAT visit, literally cheered. And we are delivering on the vision in lockstep with our citizens. A community with hope is unstoppable – I can't imagine being where we are today without the support, guidance and expertise the SDAT program afforded a small, struggling rural community in Utah."



Team Roster

Team Roster

Michael R. Davis, FAIA, LEED AP- Team Leader

Michael R. Davis, FAIA, LEED AP, Principal and President at Bergmeyer Associates, Inc., is a practicing architect and an advocate for sustainable public policy. He was 2013 President of the Boston Society of Architects and 2015-2016 Chair of the Board of Trustees of the BSA Foundation. For the American Institute of Architects, Mike currently serves as Advocacy ambassador for the National AIA Committee on the Environment and as a newly appointed member of the AIA Board Government Advocacy Committee. He participated on a national AIA Materials Knowledge and Transparency working group and was a contributing author for an April 2016 AIA sustainability white paper, "Materials Transparency and Risk for Architects". Mike has participated on or led AIA Sustainable Design Assessment Team (SDAT) and Sustainable Design for Resilience Team (DART) charrettes in Ithaca, NY, DeKalb County, GA, Augusta, GA, Tremonton, UT, St. Helens, OR, Louisville, KY, and Bath, ME, as well as the AIA's first International R/UDAT charrette in Dublin, Ireland. Mike's recent professional projects include a modular student residence hall at Endicott College, a LEED Certified facility for Hosteling International Boston in an adaptively-reused historic building, and a deep-energy retrofit of public housing units for the Boston Housing Authority at the Cathedral Family Development, which achieved LEED Platinum certification. He blogs about his firm's work as signatory to the AIA 2030 Commitment at http://mikedavisfaia.wordpress.com. Mr. Davis advised the Boston Planning and Development Agency as a Member and Chair of the Boston Civic Design Commission from 1996 to 2018and served on Boston Mayor Thomas Menino's Green Building Task Force and Massachusetts Governor Deval Patrick's Net Zero Energy Building Task Force. He holds a Bachelor's Degree in Architecture from the Pennsylvania State University and a Master of Architecture from Yale University

Dr. Luis Aguirre-Torres

Dr. Luis Aguirre-Torres is the Director of Sustainability for the City of Ithaca, N.Y., where he leads the city's decarbonization and climate justice strategies. He is also co-chair of the New York State Climate Impacts Assessment, Society and Economy. Prior to joining the City of Ithaca, he was the President and CEO of GreenMomentum, a think tank organization focused on climate change and renewable energy in Latin America. He is the former chairman of the Latin American and Caribbean Council on Renewable Energy and former energy chair of the Mexico-US Entrepreneurship and Innovation Council. He holds a first degree in computer engineering from Mexico's National University, a master's in computer science and a Ph.D. in electronic and electrical engineering from University College London.

Aida Curtis

Aida Curtis is a practicing Landscape Architect, Arborist, and certified Landscape Inspector. She has led Curtis + Rogers Design Studio in Miami for three decades. Long focused on innovation and sustainability, her firm works primarily on urban public projects. Aida's over 35 years of experience includes award-winning transportation, recreational, institutional, and civic projects. Leading the go-to Hispanic/Woman-owned landscape architecture firm in South Florida has allowed her to create sustainable spaces that are economically and socially inclusive. Aida's commitment to environmental stewardship, sustainable development and resilient landscapes has benefitted hundreds of successful municipal, department of transportation and civic projects.

Abe Farkas

Abe Farkas is a highly sought-after national leader in managing catalytic, sustainable, and equitable development projects. He has three decades of experience shepherding large, complex projects from an idea to reality utilizing public-private partnerships. His past projects include the adaptive reuse of vacant Washington High School in Portland OR into creative office, music venue, community theater and rooftop bar; a 33-acre development on Portland's South Waterfront that includes a major university research hospital expansion, mixed-use, housing and neighborhood open spaces served by a streetcar, aerial tram, and light rail; and a 118-acre redevelopment on Southshore in Austin TX, which is under construction. Abe's experience on both the public and private side of development projects gives him the ability to maximize the community benefit components of projects and achieve financially feasible outcomes. Evidence of his successful past work is visible across the country in the form of vibrant, catalytic, mixed-use projects in communities large and small. Previously, Abe served as Director of Development Services for ECONorthwest, Development Director for the Portland Development Commission, Planning and Development Director for Eugene, Economic Development Manager for Seattle, and Community Development and Planning Director for Fort Wayne. Abe has a Ph.D. in American Studies from University of Minnesota and a M.A. in American Studies from Purdue University. He has served on the board of the International Economic Development Council (IEDC) and on several advisory boards for the Urban Land Institute (ULI).

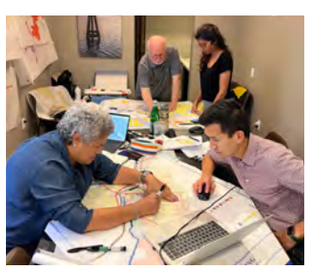
Trung Vo

Trung Vo is a planner and engineer who focuses on building multimodal transportation systems to advance equity, public health, quality of life, and mobility. He works across the spectrum of project development to ensure that streets are planned, designed, and maintained to be safe, comfortable, and inviting for people of all ages, abilities, and backgrounds. He serves as the Director for Toole Design's Denver office, partnering with communities in Colorado and across North America.

Mariam Yaqub

Mariam Yaqub is an Architectural Designer at Bergmeyer, a multi-disciplinary design collaborative with offices in Boston and Los Angeles. She came to







Bergmeyer's Boston office with work experience in Rochester and Binghamton, NY, Providence, RI and Islamabad, Pakistan. During her time in Rochester, Mariam volunteered at Community Design Center Rochester (CDCR), where she is currently a board member. She continues to promote the creation of vibrant, equitable and resilient communities by engaging, educating, and empowering stakeholders in crafting purposeful design. She believes the built environment plays an essential role in shaping communities through placemaking, walkability and inclusivity. She completed her B.Sc. Arch and M.Arch degrees from Roger Williams University in Bristol, RI during which she was a recipient of two architecture scholarships AIA Rhode Island and Raj Saksena. Her Graduate Thesis "Open-Source Architecture: Redefining Residential Architecture in Islamabad" won the RWU Thesis Award.

AIA Staff:

Paola Capo

Paola Capo is the Sustainability and Communities by Design Specialist at the AIA and staffs the Disaster Assistance program. In her position, she provides architects and communities with the resources they need to create healthier, more sustainable and equitable built environments. She graduated from Georgetown University in 2017 with a degree in Science, Technology, and International Affairs, concentrating on Energy and the Environment—a degree inspired by the many places she lived growing up as an Army brat. She recently completed the 6-week [IN]City program at UC Berkeley to expand on her knowledge in urban planning.

Erin Simmons

Erin Simmons is the Senior Director of Design Assistance at the Center for Communities by Design at the AIA in Washington, DC. The Center is a provider of pro bono technical assistance and participatory planning for community revitalization. Through its design assistance programs, the AIA has worked in over 250 communities and has been the recipient of numerous awards including "Organization of the Year" by the International Association for Public Participation (IAP2) and the "Outstanding Program Award" from the Community Development Society. Erin is a leading practitioner of the design assistance process, providing expertise, facilitation, and support for the Center's Design Assistance Team programs. In this capacity, she works with AIA components, members, partner organizations and community leaders to provide technical design assistance to communities across the world. Her portfolio includes work in over 100 communities across the United States and internationally. Erin is an Academician of the Academy of Urbanism in London, UK. Prior to joining the AIA, Erin worked as historic preservationist and architectural historian for an environmental and engineering firm, where she practiced preservation planning, created historic district design guidelines and zoning ordinances, and conducted historic resource surveys. She holds a Bachelor of Arts degree in History from Florida State University and a Master's degree in Historic Preservation from the University of Georgia.

Reimagining Petaluma

Facilitated by AIA Communities by Design

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